

This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

$1.40
Educ T 5358.87.460

Harvard College
Library

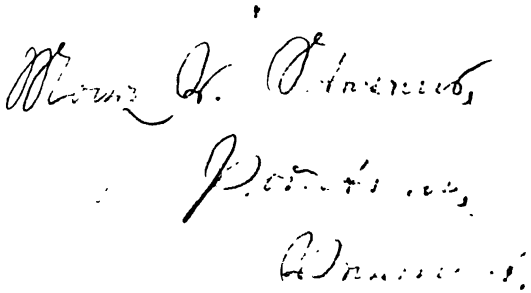


By Exchange

3 2044 102 783 792

Educ T 53.





BY SAME AUTHOR:

THE LAW OF LOVE, AND LOVE AS A LAW;

OR,

CHRISTIAN ETHICS.

A NEW EDITION, WITH IMPORTANT ADDITIONS.

One volume, 12mo. $1.75.

AN

OUTLINE STUDY OF MAN;

OR,

The Body and Mind in one System.

WITH ILLUSTRATIVE DIAGRAMS, AND A METHOD FOR BLACKBOARD TEACHING.

BY

MARK HOPKINS, D.D., LL. D.

AUTHOR OF "EVIDENCES OF CHRISTIANITY," "LECTURES ON MORAL SCIENCE," "THE LAW OF LOVE," ETC.

REVISED EDITION.

NEW YORK:
CHARLES SCRIBNER'S SONS.
1887.

Educ T 5358.87.460

HARVARD COLLEGE LIBRARY
BY EXCHANGE

JAN 8 1937

Copyright, 1878,
BY SCRIBNER, ARMSTRONG AND COMPANY

Copyright, 1886,
BY CHARLES SCRIBNER'S SONS.

RIVERSIDE, CAMBRIDGE:
STEREOTYPED AND PRINTED BY
H. O. HOUGHTON AND COMPANY.

CONTENTS.

LECTURE I.

THE PLACE OF MAN 1

LECTURE II.

THE BODY 26

LECTURE III.

MIND. — INTELLECT. — THE REASON 50

LECTURE IV.

THE REASON. — THE SENSES, EXTERNAL AND INTERNAL . 73

LECTURE V.

RECAPITULATION. — CONSCIOUSNESS. — THEORIES, BELIEFS, AND PRACTICAL RESULTS 98

LECTURE VI.

THE REPRESENTATIVE FACULTY. — CONTROL OF THE WILL OVER THE MENTAL CURRENT 121

LECTURE VII.

THE ELABORATIVE FACULTY, AND ITS PROCESSES. — CONCEPTS AND THEIR PROPERTIES 145

LECTURE VIII.

REASONING. — ANALOGY AND EXPERIENCE. — DEMONSTRATION AND PROBABLE REASONING. — INFERRING AND PROVING. — SYSTEMIZATION 172

LECTURE IX.

THE SENSIBILITY. — A GOOD. — BEAUTY. — THE LUDICROUS. — THE AFFECTIVE REASON 194

LECTURE X.

INTELLECT, SENSIBILITY, AND WILL. — THE PRACTICAL REASON. — PERSONALITY, CAUSATION, FREEDOM, OBLIGATION, MERIT AND DEMERIT, RIGHTS, RESPONSIBILITY, PUNISHMENT 221

LECTURE XI.

BODY; SOUL; SPIRIT. — SPONTANEITY; FREEDOM. — THE NATURAL; SUPERNATURAL; MIRACULOUS. — CONDUCT; OBLIGATION; A SUPREME END; CHARACTER. — THE HIGHEST GOOD; THE WHOLE GOOD; THE LAW OF LIMITATION 248

LECTURE XII.

ORIGINAL OBJECTS. — ACTION AND ITS CONSEQUENCES. — PHILOSOPHY OF ACTION FROM THE CONSTITUTION. NO CHRISTIAN MORAL PHILOSOPHY. — CHOICE. — SUPREME ENDS. — SUPREME PRINCIPLE OF ACTION. — CONSCIENCE. — A NATURE AND A NECESSITY AFTER CHOICE. — MORAL AFFECTIONS. — MORAL EMOTIONS. — RELIGIOUS EMOTIONS. — THE LAW OF CONSTRUCTION. — THE LAW OF CONDUCT. — TEST OF PROGRESS. — POSITION OF MAN AS A WORSHIPPER 275

APPENDIX 302

EXPLANATION OF THE DIAGRAM 306

PREFACE.

As compared with their delivery the following lectures are published at a special disadvantage. For their best effect they need blackboard and drawing facilities, like those of the Lowell Institute. Through those the work done was retained and kept before the audience; each subject was commented upon as it found its place in the system and on the board, and thus the system grew before the eye as well as before the mind, till it became for both a completed whole. This gave a freshness and interest that could have been had in no other way.

The substance of the lectures was preserved in a phonographic report. This, it was found, would be of so much aid in writing them out that the form of lectures and the phraseology appropriate to them have been retained, though the references to the board were so many and of such a character that a recast of many portions has been found necessary. As read, the lectures would

scarcely convey a correct impression of the extent to which the board was used.

The method of teaching an abstract subject other than Mathematics through the eye has long been practiced in Logic, but until recently has been chiefly confined to that. So far as I know, the first to apply it generally and with success was my friend Mr. Dickinson of the Westfield Normal School. This is not object-teaching. That consists in showing the object itself, but this is the teaching of relations, which are invisible, by means of things that are visible. This facilitates the holding of abstract subjects steadily before the mind, and I cannot but hope a good deal from it in the way of popularizing studies of this kind.

Perhaps it was not wise to attempt the discussion of so many and such disputed points within a compass so limited, but an outline has its advantages for both the teacher and the learner, and that is all that this claims to be. Besides, metaphysical points are capable of being stated briefly, and are often best seen when thus stated. Like that Genius in the Arabian Nights who was confined in a jar drawn out of the sea by a fisherman, they are capable of being brought into a

very narrow compass, as well as of expanding into proportions vast, misty, and mighty.

The method of the work is constructive, and so, except as a positive and progressive system must be, not critical or controversial. It gives a LAW OF CONSTRUCTION for the universe so far as we know it, by which the whole, including man, is brought into one system. It gives a LAW OF CONDUCT for man that grows out of the construction; and also a LAW OF LIMITATION that enables us, as is shown in "The Law of Love," to carry the Law of Conduct into the details of life.

In connection with this method the Intuitions are naturally divided into three kinds, and are presented in an order different from that generally followed. Part of them are also seen to be complex, and in connection with their complexity, systems that have been supposed to be opposed are readily reconciled.

In following out the system, and in turning from books to the investigation of the subjects themselves, I have found myself differing more frequently and more widely from those who are regarded as authorities than I expected. Such difference will be found not only in regard to the nature and place of the Intuitions, but in regard

to Consciousness, to Perception, to various doctrines of Logic, to the central position of Choice, and to the nature and necessity that precede and follow that as they are related to Choice and to each other. The work will, therefore, be found to differ from others, both in its Method and its System. If these are correct, errors of detail will be of minor consequence.

Whatever may be its fate, I shall be content if this work shall awaken in the community a wider interest in the study of man, — of man in his unity so marvellously complex, as he is related to the universe around him, to his fellow-men, and to God.

N. B. The diagrams which will be found in the following Lectures are to be read *from the bottom upwards;* and the reader will bear in mind that, in the use of the diagrams and of the blackboard, the process is always that of starting with a common foundation and building up.

AN OUTLINE STUDY OF MAN.

LECTURE I.

THE PLACE OF MAN.

Is it possible to present the most abstract and difficult questions of metaphysics so that they shall be interesting and profitable to a popular audience? I think it is. I think so partly because, as these questions naturally suggest themselves to every man, so the elements for their solution are found in every man; and partly from an experiment which I made here four years ago, and from my experience since.

I was aware at that time that some of my lectures, especially those on the foundation of obligation, would require more careful attention than could reasonably be expected from a popular audience; therefore, anticipating that the audience would be small, I consulted Mr. Lowell on the expediency of permitting, as had been my custom with classes in college, questions from the audience. It did not seem to him expedient, and I have no doubt he was right. Then, being averse

to saying anything that could not be perfectly understood, and seeing a blackboard behind me, I laid aside my manuscript and gave three or four lectures on the more abtruse points with the aid of that. This was thought to be a success, and I have so far followed the method since as to desire to test it further; for if these studies can be popularized, it will be a public benefit.

It will, then, be my first object in the following course to present this class of subjects so that they can be readily understood by any one who will give attention. I believe in no transcendental metaphysics which are not capable of being communicated in good English, and of being understood by any man of good common sense.

A second object will be to present man in his unity. Man is so complex, so many studies originate from him, that he is seldom studied except in a fragmentary way. Anatomy, Physiology, Psychology, Logic, Morals, are studied separately, and with little reference to their relation to each other.

I shall also wish to present at different points views of my own which I think in some measure new, and not without importance. In one sense nothing on these subjects can be new. There can be no new elements, but the elements may be presented in new relations; they may be more carefully discriminated, and, perhaps, better arranged.

We pass, then, to the study of man. And first let us find his place. This we can do only as we separate man from other beings and objects. In making this separation I observe that all beings and objects that fall under our observation are divided into two great classes — they are either unorganized or organized. Let us look at some of the differences between these, most of which have been noticed by physiologists.

Unorganized and organized bodies differ, first, in their origin.

Organized bodies originate in a germ, a seed, a spore, a cell, in something that is itself organ ized. It is now generally, though not universally, conceded by naturalists that there is no such thing as spontaneous generation. Between life and organization there is a relation of interdependence, as between the different parts of a circle. They imply each other in a way that seems to necessitate a simultaneous origin, and from a higher power. Organization could not first be without life, and life could have no means of manifestation without organization. It is said, indeed, that there is living matter that is not organized. It has been said that the amœba is a mere mass of unorganized jelly, but that is now disproved; and the assertion that anything has life, or can be made to have it, that is not either organized or the product of organization, be it protoplasm or what it may, is a mere assumption.

Unorganized and organized bodies differ, in the second place, in their composition.

Unorganized bodies may be simple, having no composition properly so called, but simply aggregation. They may have two or more elements. In organized bodies there are always three elements, one of which is carbon.

Unorganized and organized bodies differ, in the third place, in their structure.

Organized bodies have cellular and vascular tissues. They consist of parts performing functions through which those parts are mutually related to each other and to the whole. These parts cannot be wholes, while any part of a mass of silver is as much a whole as the whole is. An arm is not and cannot be a whole in any such sense as that. In an organized body the parts are mutually related as means and ends. In an unorganized body there is no such relation.

In the fourth place, unorganized and organized bodies differ in their mode of preservation.

In unorganized bodies the individual is preserved as long as the species. In organized bodies the individual perishes and the species only is preserved. In the one there is a growth and decay from activities within; in the other there is no growth and no decay, and all changes are by the operation of agencies from without. There is simply aggregation and disintegration by the action of external forces. In the one there is health and disease, in the other there is nothing of the kind.

Once more, these bodies differ in their Motive Forces.

In unorganized bodies certain general forces, as gravitation and cohesion and chemical affinity, are the forces that produce motion. But in organized bodies there is a force commonly known as Life, that coördinates the action of the parts with reference to the end of the whole. This is a crucial test as between organized bodies and those that are not. In an unorganized body there is no end of the whole within itself, so that well-being or the reverse can be affirmed of it.

There is also another such test that is worthy of attention as opposed to the efforts now made to identify the processes of crystallization with those of life. In all upbuilding by life there is first, not only a selection of the material, but a preparation of it, and then a placing of it where it is needed. Hence the movement of the material is from within outward, which is never the case under any lower force, and this movement is by a force which preserves the identity of the being while its materials are changed. We have, then, as discriminating the organic from the inorganic force, first, the preparation of the material; second, its movement from within outward, or from the point where it is prepared to that where it is needed. This is the beginning of a reverse movement, of a new order of things in which the process is not by aggregation or evolution or development, but by growth.

And third, there is identity of the being with change of the material.

I have thus mentioned the main differences between unorganized and organized bodies. By these they are sufficiently distinguished. Now man is organized.

Leaving, then, unorganized matter we pass on in our analysis of what we see around us and observe that organized bodies are divided into two great classes — Vegetables and Animals. These have much in common in those functions that are called organic, but they differ, —

First, in their composition.

For the most part they thus differ, though there are individual exceptions. For the most part animal organizations consist of a greater number of elements. Nitrogen is added. In the vegetable, oxygen, hydrogen, and carbon are always present, with little nitrogen. In the animal, nitrogen is more abundant. Hence animal substances may generally be distinguished by the peculiar smell, as of burnt feathers, which is produced by the burning of bodies which have nitrogen in them.

Vegetables and animals differ, in the second place, in their structure.

A vegetable has no muscles. It has no nerves or nervous tissue.

They differ, again, in their mode of nutrition.

Vegetables have the power, and animals have

not, of obtaining nourishment from unorganized matter. There are instances of vegetables, as the mushroom and certain parasitic plants that are nourished by matter that has been the product of organization, but there is no well established instance of an animal that is nourished by matter that has not been organized. This power of the vegetable to find its nourishment in unorganized matter is regarded by some as its great characteristic. Certainly it is the great function and use of the vegetable world to come between animals and unorganized matter, and to prepare materials for their nourishment and use.[1]

The great difference, however, between vegetables and animals is, that animals have, and vegetables have not, sensation and voluntary motion.

We may not be able to discriminate between the sensitive plant and the animal. It is marvelous how Nature simulates in that which is lower that which is higher; how she avoids abrupt and great transitions, and hence some say that there is no difference. It may be impossible for us to draw the line, but there is a line; there must be. Either there is sensation or there is not. If there be sensation, it is an animal; if there be not, it is a vegetable. It may be that God only knows where the line is, but there is a line, definite and fixed; there is a point where you go over to another thing, wholly anotner thing, because, when sensation begins it is wnolly another thing. Cer-

[1] See Appendix A.

tainly there is a point where there is no sensation, and certainly there is a point where there is sensation, and if we may not be able to draw the line it yet exists, and it is a new thing, altogether different that comes in. And the same thing is true of voluntary motion. The sensitive plant has motion, but anatomists say this is from irritability, and not from will. The motion is no more voluntary than that of the clouds. Here again there is a line whether we are able to discern it or not, a radical difference, a new thing that comes in — there is voluntary motion. These two make a difference heaven wide between the vegetable and the animal.

Now man is an animal, and we next seek the difference, or differences between him and other animals. There are, indeed, those who think that man should not be classed as an animal; and if such classification must imply that he is nothing more, they are right. Man, as man, is not an animal. So far, however, as he has animal characteristics he may be classed as an animal, and if it cannot be shown that he has something more, the classification will be wholly correct.

First, then, man differs from animals in certain physical characteristics. He is the only animal that is clearly both two-handed and two-footed. Hence he is the only animal that is fitted for an erect posture. These two characteristics, — the

release of the upper extremity from all use in locomotion, and his erect position, cause his relations to Nature around and above him to be different from those of the animals. By the hand he conquers Nature, and by his erect position he studies the heavens. No animal can do either Man is also the only animal that has a chin. I believe that is so. I know that Dr. John Augustine Smith, with whom I studied medicine, used to say that; and he said he always thought that when the chin was deficient, there was some deficiency in the upper story.

Again, man differs from mere animals in certain intellectual characteristics.

Animals have no thought in the sense in which that word is now used. They have no insight properly, that is, no comprehension of the relations of parts when parts are put together so as to make a complex whole. They may generalize faintly, but give no evidence of abstract ideas. They may know that a thing is white, but do not know whiteness. Nor is there any evidence that animals have either necessary or universal ideas in such a sense as to recognize them as necessary and universal. When an animal is driven into a corner, it is not probable that he knows it as an angle; but if he does, he does not know, and cannot be made to know, that the three angles of every triangle *must* be equal to two right angles. Whether an animal knows that

he is in space may be doubted, but he does not know that a body *must* be in space, nor that space *must* be infinite. Lacking thus those necessary ideas which constitute man rational, or at least without which he could not be rational, no animal is capable of studying any science as such, or of any rational discourse. In connection with this it may be stated that man is the only animal that uses either articulate language or arbitrary signs as a means of intercommunication.

In consequence of these physical and intellectual differences — and it is to be said that the physical differences would avail nothing without the intellectual — man has, and the animal has not, a capacity for progress in the race. Through written and spoken language man can avail himself of the experience and improvements of the past. This animals cannot do. Each generation begins where the previous one began, and runs the same round. The bee and the beaver build to-day, under the same conditions, as they did four thousand years ago. If there are transmitted modifications of instinct it is only of those instincts which tend to the preservation of the individual, and of the race.

In connection with his capacity for progress, and for possessing the whole earth, man is the only being that uses fire, or metals, or artificial clothing, or that invents and uses machinery. And what a marvelous difference does this make

in our day, this use of machinery! In connection with this, too, man is the only being capable of buying and selling, of commerce, and of an interchange of commodities.

It is further in connection with the powers already mentioned that man has the wish and the power to produce remote effects, — effects that are remote from himself both in space and in time. Man alone has this wish and power. The animal produces whatever effects it may produce through the agency of its muscles in the place where it is; but man has the wish and the power to produce effects upon the other side of the globe. It is a great and distinguishing prerogative of man that he is able, in connection with those agencies which he can control, to cause his will to be felt over the globe and through indefinite periods of time.

Whether man has emotions not from the moral nature different in kind from those of the brute it is impossible to say with certainty. I think he has. As he alone laughs, so I think he alone has the perception and feeling involved in that. As he is the only ridiculous animal, so I incline to think he is the only one that has a sense of the ridiculous.

But whatever may be said of the emotions just mentioned I observe again that man differs from all mere animals in possessing a moral and religious nature.

I know there are those who say that the dog, with perhaps other animals, has a perception of moral relations; and it must be admitted that, as in other cases of gradation, there is an appearance of something that approximates it, but is not it. The condition of a moral nature is personality. It is something within in virtue of which the being becomes, or may become, subject to moral law, of which a brute knows nothing. He is governed by impulse and not by law. The same is true of worship. The brute has not the prerequisites for it, and to identify the feeling of a dog towards his master with that, shows an ignorance of its elements. God is properly an object of worship only as He has moral character, and the recognition of this must imply a knowledge of moral law, and of obligation under that law, of which the brute is incapable. Besides, true worship can be rendered only to a spiritual and invisible God, whereas the brute is incapable of being affected except through the senses. "Whom," says an apostle, "having not seen ye love." No animal can love a being it has never seen, or can love at all on the ground of moral and spiritual excellence.

But as in passing from the vegetable to the animal we found a single decisive test, so I think we may here. A number of tests have been proposed. Some have said that the distinctive difference between man and the animals is the power of form-

ing general ideas, and of using general terms; some that it is the power of abstraction, and others that it is the power of looking in upon himself, and of so making himself the object of his contemplation as to become at once both subject and object. But to me it seems that the discriminating difference is that man has the power to choose his own supreme end and the brute has not. A brute acts from impulse and is driven by its constitution to its end. It has no power to compare different motives and principles of action and to make one supreme. It has no power of choice with an alternative in kind, and so no true freedom. It is not a being that is capable of contemplating different possible ends of its being and of choosing or rejecting its true end. Man is such a being. Hence man has, and the brute has not, elements by which he may become a fool. A brute cannot be a fool. Only a man can be a fool. There are no elements in a brute by which he can be made a devil; neither are there any by which he can be made an angel. But man can become a fool, or a devil, or an angel.

Thus, as I think, do we find man. He is broadly discriminated from all other beings; so broadly, that he properly belongs to a different order.

Of man, as thus found, we next inquire what his place is relatively to other beings. We say that he is higher than any other being. But by

what test? If the brute were to make the statement would he not say that he was higher? Is there any proper test by which we can ascertain what is higher and what is lower?

Naturalists say that specialization is a test. We find in what are called the lower forms of organization that the functions, as of nutrition and of circulation, are performed without particular organs, and that, as the animal becomes higher, the organs are specialized, and each function has its own organs; and it is generally true that as there is more specialization the animal comes to be higher. At the same time the specialization in the musquito, for instance, is as perfect as it can be anywhere. There is no more perfect adaptation or specialization in Nature that I know of than in the bill of the musquito. There is a larger amount of specialization in man, but the specialization itself is as perfect in the lower animals as in him.

But we need a broader principle; we need one by which we may judge of that which is higher or lower, not merely with respect to animals as they are related to each other, but with respect to the forces of Nature, the faculties of man and their products, and the whole structure of the universe. Such a principle, if there be one, must be that which gives its unity to the universe. The principle is, that those forces, and forms of being, and faculties, and products, are lower, which are a condition for others that are conditioned upon

them. I believe that there is a great law of conditioning and conditioned, by which we may know what is higher and lower throughout the whole range of being.

But here it will be necessary to say that I do not accept the doctrine adopted by both Hamilton and Mill, and also by some of our American writers, that there is no difference between a cause and a condition; or that the condition of a thing is, in any proper sense, a part of the cause. Sir William Hamilton says, "By cause I mean everything without which the effect could not be realized." That is his definition of a cause. But a house could not be without materials of some kind of which to construct it; and I ask you whether, in accordance with any proper meaning of that term, the materials are a part of the cause of a house, or whether they are simply a condition through which it becomes possible that the intelligent agency of the builder should be put forth and become a cause. The same may be said of the foundation of a house. Without a foundation a house cannot be, but the foundation is no part of the cause of the house. The earth could not be, we could not be, without space. Space is the condition of matter. I ask you whether you believe it is in any proper sense its cause. I therefore make a distinction at this point between a cause and a condition. It is a distinction which I think may be maintained, and which ought to be main

tained in the interest of both clearness of expression and of thought. I say, then, that some things are the condition of other things; that the law of conditioning and conditioned runs through God's universe; and that it is that by which we know, or may know, scientifically, that one thing is higher than another.

Let us then see how this is with reference to the great forces by which the universe is controlled. I speak of forces, and for the present we must speak thus whatever may be true of the doctrine of the correlation of forces by which it is possible they may all be resolved into one. Indeed, it matters little for our purpose whether what we have been accustomed to call the great forces of Nature are really separate forces, or different modes of one force. Leaving this, then, let us suppose, according to the statement of the Bible and the nebular theory, that "In the beginning the earth was without form and void,"—mere diffused, nebulous, chaotic, surging matter in space; what would be the force which must act in order to bring this matter into such a condition that it might serve the purpose of a world? Evidently it would be the force of Gravitation; that is to say, it would be that force by which all matter tends towards all matter by a certain definite law. It would be necessary that such a force or mode of force should exist and apply itself to every particle of matter in order to its aggregation in such a way

that it could become subject to the action of any other force or mode of force. Being thus the condition for the action of any other force we may set *Gravitation* down as the lowest and most universal of all the forces or forms of force.

In matter as thus subject to this lowest and most universal law we find those two aspects of it that have set thinkers in opposition to each other as they have regarded one or the other of them exclusively. These are the aspect of necessity; and that of being controlled with reference to an end. The necessity is apparently absolute since there can be nothing in matter to resist the force, and since its movements under this law can be mathematically calculated. These movements would therefore seem to have not only the necessity that belongs to physical law as uniform, but that absolute necessity which is involved in mathematical relations. On the other hand, no evidence of freedom can be greater than the control of force directed to an end: and that matter under the control of this force is so directed there can be no doubt. And so these two aspects or faces of matter under law have looked, one towards necessity and atheism, and the other towards freedom and God, and men have failed to see their reconciliation in the fact that absolute uniformity — even that which may be expressed by mathematical relations — may be the highest and most perfect result of an intelligent will working towards an end which

could be best accomplished only in that way. These two aspects I refer to now because they are quite as prominent in this lowest law as in any other, and because they present themselves in every form of physical law.

By gravitation matter is brought together, but simply as loose particles. That it may be serviceable as matter now is, there must be a force which will unite the particles into separate bodies. What is this? It is the attraction of Cohesion. This exists between the particles of all bodies whether solid or fluid that can be defined or limited as separate bodies. This would give us a world made up of the different kinds of matter indiscriminately mixed, or with kinds separated as in crystallization.

What force, then, is there by which such indiscriminate mixture may be avoided, and the varieties and combinations of matter as we now have them be given us? It is Chemical Affinity, which is the next higher power as conditioned upon gravitation and cohesion. Under this, also, as under gravitation, we have uniformities so perfect that they may be represented by mathematical formulæ.

We thus have the three great forces of inorganic matter in their order as lower and higher, each one of them being the basis of some form of physical science. Gravitation gives us Astronomy, with the laws of falling bodies; Cohesion gives

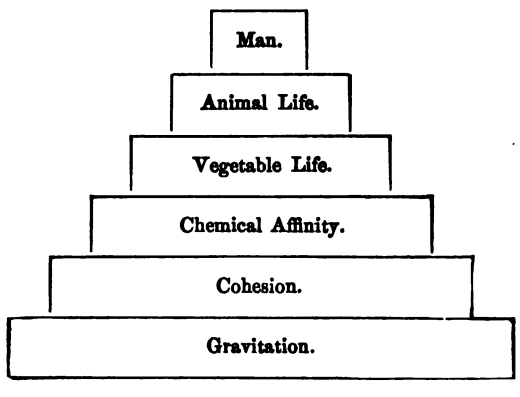
us crystallography and portions of mechanics; and Chemical Affinity gives us the now great science of Chemistry. These laws suffice to themselves. They would produce a permanent world and system of worlds, but these would be of no use except as a condition of a higher order. That higher order they anticipate and prefigure by producing through crystallization regular forms. In crystallization, and in crystals, through definite form, we find the lowest point of transition from inorganic to organic matter. Here again, too, we find matter controlled under the semblance of mathematical necessity with reference to ends, — the ends of beauty and of utility. Special mystery is supposed to be attached to the force that gives us organisms, but I do not see that it is more mysterious than that which gives us crystals. Indeed the whole mystery is given in any form of force apparently impersonal, whether it can be expressed by mathematical formulæ or not, that works so uniformly as to give what we call a law, and to seem necessitated, and yet that works in the interest of ends beyond itself, and that run up into spheres of which, regarded as impersonal, it can know nothing.

So these laws work, regarded as the condition of the manifestation and force which is next above them. This is vegetable life. These laws being given, and working upon suitable materials, we have the condition on which vegetable life, whatever that may be, can work. Without them vegetable life could not be.

Again, having vegetable life given, mediating as it does between inorganic nature and animal life, by converting inorganic matter into food, by absorb ing superfluous carbon, and by giving out oxygen to supply the waste made by animals, we have the conditions, and the only conditions, on which animal life could be produced and permanently maintained. This then gives us our next higher force — Animal Life.

But one higher force remains, that is, Rational or Spiritual Life. That an animal life is a necessary condition of this in all beings, is not claimed or supposed. But in man it is. Man exists in his present state only as the laws and forces already mentioned are given as a part of himself, and to be subjected under the force of a Rational and Free Will. This gives us MAN.

These forces, their products and relations, may be presented on the board thus,



In this figure we see the different steps of the creation as it went up, taking with it all that was below, and adding something at every step. At first we have only Gravitation, then Cohesion; but every particle that coheres also gravitates. Then we have Chemical Affinity; but every particle united by that also coheres and gravitates, and so on upward till we reach man. In him we find at work Gravitation, Cohesion, Chemical Affinity, that Organic Life which belongs to the vegetable, a Life that is merely animal, and also that higher Rational, Moral, and Spiritual Life, which is peculiar to himself. Everything is carried up, and then something is added — it is not developed from what is below, or caused by it — but added to it till we reach man at the top. Man is there by the possession of everything that is below him, and something more, — that something being that which makes him man.

Having thus in himself generically all that is below him, man has the power of entering into sympathy with it; and then, in virtue of those rational and moral powers, and of that freedom of choice with an alternative in kind which he alone possesses, he has not only the capacity to comprehend speculatively what is below him, which no animal has in any degree, but also the higher capacity and the natural right to rule over it. Thus do Philosophy and the Scriptures agree in making the outcome of those faculties by which man is distinguished from the brutes to be *dominion*. The

idea of dominion on the part of any brute as originating in comprehension, as exercised in freedom, and as extending over any distance in space, or any period of time, is absurd.

Looking at the relations of the forces and powers as presented on the board, we see that man has a right to the highest place on two grounds. First, all other things are a condition for him. He is conditioned upon them. They precede him, not arbitrarily, as a herald precedes a king, but in the way of preparation, as soil precedes vegetation, and as vegetable, precedes animal life. So far as the creation was a process of upbuilding, that which came last was of course highest. But again, man is also highest because he subordinates all things to his own ends and uses them as they do not use him. Pope says, indeed, —

> "While man exclaims 'see all things for my use,'
> 'See man for mine,' replies a pampered goose.'"

But though in the ordering of Providence man may be of use to the goose, it is still true that he makes use of the goose, while the goose does not make use of him at all. So of all other animals, and of all natural forces. The earth was given to man that he might "replenish," and "subdue" it, and make it subservient to his own ends.

The superiority of man as thus seen is not anomalous. It is wholly analogous to the superiority of each higher force to those below it Each of them makes use of those below as they

do not of it; and, indeed, each manifests itself only on the condition of overcoming that which is below it. Cohesion in the wall above us and in the objects around us, manifests itself only as it overcomes gravitation, holding the parts in their place in opposition to it. If there were as little cohesion among the particles of the wall as there is in water, it would come down at once. Chemical Affinity manifests itself only as overcoming cohesion, and Vegetable Life only as overcoming all the three lower forces, separating from their affinities and cohesions the particles it needs, bringing them into new relations, and lifting them, in opposition to gravitation, a hundred and fifty, yes, in the great trees of California, three hundred and fifty feet into the air. And this holds all the way up. Man acts, as man, chiefly as he resists and overcomes lower forces.

The above relation of these forces to each other in its bearing on the doctrine of development was, I believe, first seen and stated by President Chadbourne in his lectures here on Natural Theology. That bearing is this. It is not readily seen how a force manifesting itself in conjunction with other forces, and yet only as it makes them subservient, can be developed from those forces. It would seem to be making the effect mightier than the cause, and so to be violating that fundamental law of causation by which for every effect there is demanded an adequate cause.

From the figure I have drawn you will see how it is that the universe gets its unity. It is because each lower force is a condition for that which is above it, and is then taken up and acts in conjunction with the higher. On any other system the forces would be either alien or discordant.

You will also see how it comes to pass that the structure of the universe, or rather of that part of it with which we are more immediately connected, must be regarded as pyramidal. The sphere of the lowest force is the broadest. There are more bodies affected by Gravitation than by Cohesion, more by Cohesion than by Chemical Affinity, more by Chemical Affinity than by Vegetable Life, more by Vegetable than by Animal Life, and more by Animal Life than are under the dominion of Reason, or are possessed of it.

But while this is true, it will be observed that we have here two wholes that are inversely as each other. If, as we go up step by step we diminish the number of individuals so as to form a pyramid in respect to numbers, we add at each step to the number of forces, so that in respect to them man is a greater whole than any below him. These two wholes are analogous to those of extension and comprehension, which belong to the concept, and will be spoken of hereafter.

I said that I should be glad to present to you man as a unity. You now see what the idea of unity is. It is in contrast with that of a unit

and can result only from some relation of parts that go to form one whole. I propose then to present man as having a unity in himself similar to that which I have now presented to you as belonging to the universe, and in the next Lecture shall present that unity as it is manifested physically in the different systems of which his body is composed.

LECTURE II.

THE BODY.

We have now separated man from all other beings and things, and have found his place. This last we have done by comparing the great forces of the universe and finding what I called the law of the conditioning and the conditioned. According to this, Gravitation, the most universal of the forces, is the condition for the others, and so the lowest. Next above is Cohesion. Of this, Gravitation is the condition, but not the cause. These two, again, are generally, not always, the condition of Chemical Affinity; these three, of Vegetable Life; these four, of Animal Life; and these five, of that higher Rational and Spiritual Life which is peculiar to man. In each case, as we go up, we take with us all that is below, and add something; and in each case we introduce, not merely complexity, which some have made the test of higher and lower, but we introduce a force which subordinates to itself all that is below it; which indeed manifests itself only by thus subordinating and overmastering that which is below it. Hence the impossibility that the higher force should have been developed from the lower. So far as these forces are concerned, if

the universe had been constituted for the purpose of excluding the idea of development, it could not have been more effectually done.

In virtue of the law thus given we have a pyramidal structure of the universe which gives us a basis for the symmetrical classification of the sciences. The first three forces give the Physical Sciences. As matter acts in masses, or in molecules; through vast distances, or distances imperceptible, we have Astronomy and Chemistry. The fourth force gives us Botany in its various branches; the fifth gives us Zoölogy; and the sixth Civil Law, Political Economy, Ethics, Metaphysics, all those sciences which originate from man as their subject. This conception has always entered unconsciously into the classification of the sciences as a whole, so far as they have been classified, and often also into the arrangement in particular sciences. It is a law of the forces. It is not a law of logic. It is not a mere classification. It is a law of the forces, and so underlies the classification and the logical relations. It is not a law of interdependence. It is a law of dependence of the upper upon the lower forces, but there is no dependence of gravitation upon any other force, and, where the method is by the addition of superior forces, there is no dependence throughout of that which is below on that which is above. Vegetable life is dependent upon the forces below it, but they are in no way dependent upon it.

To this law of conditioning and conditioned I ask particular attention, because it will give us our method in the investigations that are to follow. I do not speak of it as anything new. It was stated by me some ten years since in this place, and will be found in the Lectures on Moral Science then delivered and since published. But as I am to make so free a use of this law, as it is, indeed, so the condition of these Lectures, that I could not have delivered them without it, their whole method depending upon it, it may not be unsuitable for me to say that so far as I know, it had not been previously stated. I feel, therefore, that I have a right to it. It came to me, not in the interest of physical science though it covers the physical sciences, but in the interest of Ethics, and as lying at the basis of the law of limitation, to be spoken of hereafter. It is, I think, the law that pervades the structure of the universe up to the point where a true causation comes in, and gives it its unity; and it is under the guidance of this law that we now take up the study of man.

We have separated man from everything else; we have shown his place; and now, in accordance with the law just stated, we make a further separation thus, —

MIND.

BODY.

In our present state the body is the condition of the mind as we know it. We therefore place it

below, and begin with the body. We wish to study man as a unity. This we can best do by a separation of the parts of his complex nature, by taking that part first which is lowest, and so a condition for all the rest, and so on upward till we reach that which is highest, and so the condition of nothing above it. If we can do this we shall have an "Outline Study of Man" throughout.

First, then, we take the body. This is the subject of two sciences of which one is the condition of the other. We therefore place them thus,—

PHYSIOLOGY.

ANATOMY.

Anatomy is simply descriptive. It tells us what there is in the body. Physiology teaches us the function, or functions of each part, and how those functions are performed. The three questions which I endeavor to teach my classes on this subject to answer are, First. What is there in this part of the body? Second. What function does it perform? Third. How, or on what conditions, does it perform it? Whoever knows all that is implied in these questions knows all he needs to know in regard to the body in health, since a knowledge of the laws of health is involved in that of the functions and the mode of their performance. The physician needs to know another class of sciences. That you should all know the position and structure of those organs and tissues of the body by

which the functions of life are performed, is desirable, but not necessary for our present purpose.

The body is not a single system. It is constituted of different systems that are separate from each other, and are capable, at least some of them, of being shown separately. They have intimate relations to each other, and are bound up together, but are still separate, and each of these systems has a separate function. If then we would study this subject in accordance with the principle laid down, we shall need to inquire in the first place, just as we inquired in regard to the lowest and most universal force in nature, what that fundamental function is without which none of the rest could be performed.

I am perfectly aware, and it cannot fail to occur to you as I proceed, of the circle that is implied in these inquiries. In any given organization, life seems to move in a circle, each system and function implying every other. The heart, where there is a heart, implies the stomach, and the stomach, the heart. The heart needs the stomach to supply it with nutriment, and the stomach needs the heart to supply it with blood. This is because, when we reach organization, we find, not merely as heretofore, dependence of the higher upon the lower, but a system of interdependence. In all organizations, there is not only a dependence of the higher upon the lower, but also a reaction of the higher upon the lower, binding

them together in a union so close that "if one member suffer all the members suffer with it." In this view of it the different systems may be said to be reciprocally conditioned upon each other. Still there is an order of nature and of thought by which these systems may be presented as conditioning and conditioned, in accordance with the principle already laid down.

To proceed then: if anything is to be built, it is obvious that we must have something to build it of. We must have material; and in the case of all organizations, so far as I know, some preparation of that material is needed. The process by which this preparation is made in the human system, for we are now speaking only of that, is called digestion. This process, with its accessories, is performed by the organs of mastication, and by the stomach and intestinal canal, together with the organs of secretion connected with them. It consists of various steps, and is so scientific that science cannot perform it; or, if you please, so artificial that art cannot reach it. So it is in man, and indeed everywhere; but in the lower forms of organization the process is simple, and the organ may seem a mere surface. But whatever the organ may be we must have the material; that material must be prepared; the process by which it is prepared is digestion; and, as that process is, at least in thought, the condition of any other, we may set down as lowest

But when the material for building up the body has been prepared, what next is required? evidently it must be transported to the point where it is needed. The system which does this is composed of the heart, the arteries, and the capillaries. The veins, as returning the blood to the heart, are accessory to these, and are a part of the same system. As the blood goes out from the heart and returns to it, it is said to circulate, and this movement gives its name to the system. Its object, however, is distribution, and since this is immediately conditioned upon the digestive system, and is itself the condition of any other system, we have as next in order

THE CIRCULATORY SYSTEM.

For some reason not fully understood by us it is requisite for the fitness of fluids which are to be used in building up animal bodies, I believe universally, certainly it is so in man, that they should first be acted upon by the oxygen of the atmosphere. That this may be done we have what is called the smaller circulation, in which the blood is carried from the right side of the heart through the lungs, and returned to its left side. In thus passing it loses carbon and its dark color, taking on a bright scarlet, and thus becomes fitted for its work. We thus have

THE RESPIRATORY SYSTEM.

What next? The material is now prepared for use, but its constituent parts are mixed in one fluid, and we need special fluids to be used for particular purposes in different parts of the body. We need tears to moisten the eyes, and ear-wax to guard the ears from insects, and saliva to moisten the mouth and to enable us to swallow food that is dry. For digesting the food and its chylification, we need the gastric juice, the pancreatic juice, and the bile; we need synovia for the joints, and we need to have the ashes of the system, when the carbon has been consumed, separated and carried off. These and similar selections and processes are performed for the most part by what are called glands, sometimes by what seem to be only surfaces, and the system by which they are performed is that which comes next in order. It is called

THE SECRETORY SYSTEM.

But in the processes of life there is constant waste. The material becomes unfit for use. What are you to do with it? You strike your finger-nail and there comes under it extravasated blood. What is to become of it? Plainly we need a set of vessels, everywhere at work, that may be called scavengers, as having, for their chief office, to gather up waste material and carry it into those channels by which it may be eliminated from the body. This system is next in order, and is called

THE ABSORBENT SYSTEM.

The systems already considered, or at least the functions performed by them, seem necessary to life in any form. We now pass to those that are built up by these, and which belong to special forms of life, generally those that are higher. If the body of man was to be erect and movable, a permanent frame-work with joints was necessary. Such a frame-work we find in the bones. Of these the main objects are support and leverage, but they also, as in the skull and thorax, furnish protection. For these all the other systems are a condition, and so we have in the next place

THE OSSEOUS SYSTEM.

Having then something to be moved, and having joints and leverage, we need that which shall move it. This we have in the muscles. These are adjusted to the bones so as to produce by their mutual contractions and relaxations just the motions, and all the motions of which the joints admit. For these, in a being like man, the bones are a condition. We thus have next

THE MUSCULAR SYSTEM.

But the muscles have neither intelligence nor power, unless, indeed, it be what is called the *vis insita*, by which they are simply held in position, and hold the bones strongly together. If they are to contract, it must be by a stimulus from without

themselves; and if they are to contract in obedience to intelligence and will, there must be some system in which that intelligence and will shall more immediately reside. This system must, moreover, be related to the muscles on the one hand, and to the external world on the other, so as to be at once receptive of sensations and a fountain of power. Such a system we have in the brain, the spinal marrow, and the nerves. Of these the larger portions are central, are wholly inclosed in bone, and show by their position and the care with which they are guarded, that the other systems were made with reference to them, while the nerves are channels of sensation and of motive power. We thus have next, and highest as completing the individ ual,

THE NERVOUS SYSTEM.

But though we have thus reached the top so far as the individual is concerned, we have not yet enumerated all the systems. There are two more, incidental, but yet essential.

The systems already given have been given as separate. They may be conceived of as separate, and several of them may, to a great extent, be actually separated from the rest. If we but had the skill, the circulatory, the digestive, and the nervous systems might be drawn out from the rest and shown separately as the skeleton actually is. How is it then that they are so bound

together as to become a unity? This is done by a mass of cellular tissue which envelops and pervades the other tissues of the body. Take, for instance, the muscles as composed of those little fleshy fibres that have the power of contraction, and each one of those fibres is enveloped by a portion of cellular tissue that passes on to a point where they all unite and are hardened into a tendon. This tissue thus pervading all parts of the body is called cellular, because it is connected throughout by cells, and it is in that that the fat is deposited. It is in that also that the water collects in dropsy. A man with this disease may seem large, but if you tap him in the top of his foot, several gallons of water will run off, and he will collapse at once, showing that this cellular tissue is connected throughout the body. It is exceedingly fine. If it could be separated, it would weigh but a few ounces, and you could double it up and hold it in your hand. It has withal no sensibility, and yet it is absolutely indispensable to the unity of the body that there should be this fine, all-pervading, unobtrusive system. It is called

THE CELLULAR SYSTEM.

But since it performs no distinct function by itself, but is only incidental and subsidiary, it cannot be ranked with the others. It seems to

me it should be written across the ends of the others to show that it pervades the whole, and binds the whole together.

The Cellular System, however, is not the only one that is thus incidental. It binds the others together indeed and gives them unity, but they also need to be covered. They would not look well otherwise. We have therefore a covering provided, which also indeed performs other functions. It consists of three layers, the scarf-skin, the rete mucosum, which holds the coloring matter, and the true skin. These three parts, including the hair and the nails, which are supposed to pertain to the scarf-skin, compose

THE TEGUMENTARY SYSTEM.

This also requires the same arrangement in the mode of its presentation as the Cellular System.

I have now given in their order the functions that seem necessary to be performed, and also the systems that perform them, but there are two great functions performed in the body for which we know of no systems. One of these is what is called

ASSIMILATION.

This is the most wonderful process that takes place in the physical system, that is, if there is any difference between them. You will see what is meant by this. Suppose you have the food prepared, suppose it changed by the lungs, and circulated, and

special fluids secreted, what have you to do further? Why, you have to construct the system. Here you have a great variety of substances and tissues; you have the skin, the hair, the nails, the muscles, the bones, the enamel of the teeth, the peculiar matter of which the eye is formed, and all this is to be taken from one common fluid, that is, the blood. Now when the food is brought in a fluid state to the point where it is needed, what is it that causes it to become skin, or nail, or bone, or muscle? What is it? Nobody knows what the system or organ is that does it. As far as we can understand it, it is performed at the point where the arteries terminate and the veins begin. And that is most marvelous, because, so far as I know, there is no microscope, wonderful as are the improvements in that instrument, that can discover the exact point where the arteries run into the veins. Yet there is no doubt about it. It is, as it is called, a system of circulation. The blood goes in a circle, and moreover there is no doubt about the fact of a very free intercommunication between the arteries and the veins. Some of you may remember, I do, when they used to bleed people, and may have noticed how the flow of the blood would be instantly quickened by loosening the cord about the arm when it had been made so tight as to check the flow of blood in the artery. This was such as could be accounted for in no way except by supposing the

arteries and veins to inosculate, as the doctors say, at some point, and so, to form one continuous circle. It is at that point, so far as we can judge, that this process of assimilation takes place. But what is it at that point that knows the material that is required for bone, for muscle, for skin, for the enamel of the teeth, and selects it, and carries it to its proper place, and so fixes it there as to complete the texture? What it is nobody knows, but it is this selection of material from a common fluid, and this compacting and arranging of it into organized tissue that is called assimilation, and it is a wonderful process — a process without which all the others had been useless. So far as we can discover, there is, as has been said, no separate system by which this process is performed, but it seems to be performed by the capillaries that connect the arteries and the veins.

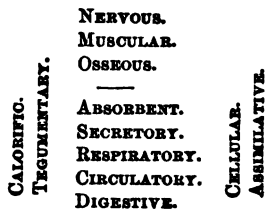
Then there is another great function which seems to have no separate system. This is what is called

CALORIFICATION

or the heating of the body. On that subject there have been all kinds of theories since my remembrance. There was a time when the heat of the body was accounted for by supposing that the lungs were a furnace, and that there was combustion in them just as there is in a fire-place. No doubt there is in the lungs a union of oxygen and carbon, and carbonic acid is formed. But then it is not

any hotter in the lungs than it is elsewhere. But if the fire is there it ought to be hotter. Then it was said that arterial blood contained latent heat which was diffused as it went on. That was in the days when it was supposed there was such a thing as heat, but since that is exploded, and all heat is motion, it may be doubted whether there is such a thing as latent motion. It would appear therefore that the function of calorification is performed in some way in connection with that of assimilation, perhaps in accordance with the law that heat is evolved when a fluid becomes solid. It may be also that in that destruction of organization which is constantly going on in the body, there is a union of oxygen with the material, from which heat is evolved. At any rate we know of no separate system by which this function is performed.

We have then, so far as I know, the systems and functions that are requisite for the well-being of the body, and they may be presented together thus:



That is the order in which, on the whole, I

should put them. In regard to some of them there may be room for question. If there are physicians here, they, very likely, would think so. For instance, there might be criticism at this point. I have put the circulatory immediately above the digestive system, but when the material is digested and separated in the stomach and intestines, before it goes into what may properly be called the circulatory system, it is taken up by a set of absorbents called lacteals, and is carried by them into the circulatory system. Some physiologists would therefore say that the absorbent system should be placed next above the digestive, but I regard the lacteals as a part of the digestive system, and think that that system properly continues till its product is delivered over to another.

If now you look at that as a whole, you will observe that it may be divided into two parts by a line between the absorbent and osseous systems, and that the five which are below are used for the purpose of building and repairing the three which are above. Whatever you may say about the arrangement of the whole, nothing can be plainer than that the five lower systems are necessary as a condition for those which are above them. These are the builders and repairers, and their functions are common to vegetables and to animals. Vegetables have what is equivalent to digestion; they have a circulation, and they have respiration. A tree breathes through its leaves,

and it circulates its fluids once a year. It has also secretions and absorbents. All these are common to the animal and the vegetable, but the three above are the systems that are to be built up.

But between the two classes of systems now pointed out there is also another difference. Of the three lower systems the organs are in the great cavities of the thorax and abdomen, which are mainly given up to them, and they all perform their functions without our knowing anything about them. They are involuntary. There are, indeed, some muscles, as those of respiration and of the eyelids, that are partly voluntary and partly involuntary, but these are wholly involuntary, or at least, they are so with most persons. Occasionally there is an exception in some respects. I knew a man who could stop by his will the beating of his heart, so that it would beat eight times less in a minute; and there is on record the case of a man who had power over his heart in this respect, and who went so far as to make bets about the time he could stop it, till at length he stopped it, and it never beat again. In general, these five are involuntary; their organs are concealed from view, and are placed where they are needed without regard to symmetry.

And here again there is a difference. The three higher systems are symmetrically divided by a vertical line into two equal and similar halves, —

these, and all the special organs connected with them. Thus you have on each side an eye, an ear, a nostril, an arm, and so on, and these are generally so far equal and similar that most persons observe no difference. There are, however, few if any, the two sides of whose faces are precisely alike. Their eyes are not alike, the form of the muscles on the two sides of the face is not alike. I know a lady who says that she is careful to turn the company side of her face to those she is speaking with. In some this difference is more conspicuous than in others, but in general it is not noticed except by artists.

Thus is a voluntary and symmetrical system built up by one that is involuntary, and presented to an intelligent spirit for its use and control.

The systems of which I have spoken are combined in different proportions, and that gives rise to the doctrine of Temperaments. In their enumeration of these, physiologists are not uniform. They speak of the sanguine, the bilious, the melancholic, the phlegmatic, and the nervous. This doctrine of the temperaments is of ancient date, and was once in high repute; but since attention has been more directed to the connection of the mental operations with the nervous system, it has been less esteemed. Still there are those who judge of other men by the predominance of these different systems, and no doubt there is some foundation for this. No doubt the predominance

of the nervous, or the muscular, or the lymphatic system will be connected with certain traits of character, or rather with certain characteristics; but at present the temperaments are so poorly defined, and so inextricably mixed, that no doctrine respecting them can be called a science, or scarcely scientific. Perhaps more may be learned by the relation of the three great cavities, that of the brain, of the thorax, and of the abdomen, to each other. With the cavity of the brain and of the thorax both large, you may count on a powerful man. With the cavity of the brain small, and the expanse of the abdomen large, you would expect less general power. No man thus constituted has been known to accomplish much.

In connection with these systems, I again call your attention to the doctrine of development which was spoken of in the last Lecture. Is the body developed? Are these systems developed? Starting as the body does from a cell, the doctrine of development may seem plausible. This doctrine, so far as it can account for anything, supposes two things: first, a force that works from within; and second, a whole already existing, that is enveloped. If either of these be wanting, there can be no development that we need trouble ourselves about, and indeed the word loses its meaning. A house is not developed. Its increase in

size or elevation is by an agency from without. The figure on a carpet, as it gradually appears, is not developed; it grows, and that through an agency not in the loom, or in the materials. When, therefore, we inquire whether the body is developed, we inquire whether its different systems are in any sense enfolded in the cell from which it starts, and are made manifest by a force inherent in itself. This point we need to settle. Precisely what we mean by development we need to know, lest we fall, as is so often done, into a learned ignorance by substituting a word not well analyzed, but become familiar, for a knowledge of the thing.

With this statement, if we look at the relation of the systems mentioned to each other, or even of the different parts of individual systems to the other parts, we may see what this doctrine, as thus applied, amounts to. Take, for instance, the osseous system. Each bone of the skeleton grows from a distinct centre of ossification, is formed as a distinct instrument, in most instances tipped with cartilage, and except through this cartilage never comes into contact with any other bone. The bones of the upper extremity are a separate organization that do not touch, except at a single point those of the lower. The bones of the skull commence at different points and grow towards each other, uniting by sutures. The bone of the tongue is wholly unconnected with any other bone

and so could not have been developed from the system. The teeth grow in the jaws, but are separate instruments, and are not developed from them. Indeed, each bone seems to have been formed separately, as a mechanic forms nails and pegs and the different parts of a chair, and then brings them together. There is nothing to indicate that they start from a common centre. Take, again, the heart and the arteries. Let the arteries run on till they become capillaries, and then enlarge themselves again and come round into the heart in the vena cava. Does anybody believe that this double set of vessels could have been developed from the heart and thus joined at the extremities? And if that be so when but a single system is concerned, much more is it so in relation to the several systems. To me it does not seem possible that each and all of these can so exist in a single cell that their production can be at all accounted for by development. The process stands by itself — both that of origination and of growth, and is utterly inscrutable. Growth is not evolution. It may accompany it, but is not it.

And now that I am on this subject there is another point connected with a system that I have not yet mentioned, and which bears upon both origin and development. I have not mentioned

THE REPRODUCTIVE SYSTEM,

which is the last in order, and has relation to the

race. This involves that sexual relation which is so universal and controlling in the structure of organized bodies. This relation implies more than one individual as its condition, and the difficulty is to account, not merely for one individual by development, but for the first two that held to each other this relation. In all the accounts I have seen, this difficulty has been either ignored or slurred over. According to the Bible, as you will remember, the fact of this relation in our first parents is connected with the idea of creation. It is said, "male and female *created* He them;" and I ask you whether the idea of this relation, especially as so pervasive and involving such variety of adaptation, does not necessitate an origin by creation. In dicecious plants, unless there were originally two, how was the species perpetuated? Not as now certainly. So of animals and of man. Give us a first pair and we have no difficulty; without that, it seems to me we must suppose processes for which facts furnish no support, and the present order of Nature no analogy. Such processes we must suppose, and, unless we resort to that cuttle-fish ink of philosophers, indefinite words, we must ultimately get back to the fact of a creation. Go back as we may, development presupposes a whole either in idea or in fact, and the origin of such a whole demands intelligence and creative power.

Connecting, then, this fact of the sexual relation in organized matter with that relation of the forces

in unorganized matter mentioned in the last Lecture, by which the higher force reveals itself only as it overmasters the lower — which fact indeed runs up through the various grades of organization — and it is difficult to see how a physical universe could have been so constructed as to exclude more effectually the idea of development. The two relations demand a power working from without, and from above.

Looking now at these systems as a whole, I may observe in a practical way that we see what health is, and to what our attention is to be directed in preserving it. Health consists in the performance by each system of the body of its function, or functions, in a perfect manner. Let each system thus perform its function perfectly and there will be perfect health; otherwise not. Hence, in preserving and promoting health, attention should be directed to the performance of function, rather than to technical and formal rules.

In looking also at the different combinations of these systems, and at the differences between men thence resulting, we may see that it is one thing to study man, and another to study men. In one case we study those things in man which are common to all men, and only in those respects in which they are thus common; that is, we study uniformities. This gives us science. In the other case the things that are common are presupposed,

and we study men only as they differ. Uniformities — differences — as men perceive and arrange the first they become scientific; as they perceive the second they become practical; as they are able to combine both they become both scientific and practical. Often these are not combined, hence a man may be scientific and able to talk well, and yet utterly fail in practical affairs; or, again, he may know nothing but differences and details and be a successful business man. You will see at once that in a course of Lectures like this it is only the knowledge of man that can be taught.

We have thus seen, as I promised to show you, that the body is built up on the same principle as external nature. It has its unity in the same way, one system being conditioned upon another; but the unity is more close, because here the higher systems react upon the lower, and thus give a reciprocal sympathy of all the parts.

And now I will close this Lecture by asking you what it is that constitutes this body which we have thus considered. Is it simply the shifting matter of which it may happen to be composed at any given moment? or is it not rather that permanent, invisible, automatic, selecting and arranging power which begins with us and goes with us to the end?

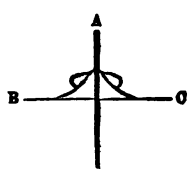
LECTURE III.

MIND. — INTELLECT. — THE REASON.

EXTERNAL nature is built up on the principle of the conditioning and the conditioned. Thus built it becomes a condition for the body of man. That again, as we have seen, is built up on the same principle. Is this true also of the mind? To that we are next to pass, but before doing this we must notice here, as we do at every point of transition in nature, the care that is taken to prevent the transition from seeming abrupt. The transition is absolute and perfect. An element wholly new is introduced. Sensation, which we have now reached, is not gravitation, nor any modification of it. But when the new element is introduced it is so foreshadowed and simulated by that which is below it that it is often difficult to fix the point of transition, and some are even led to doubt whether there is such a point. And nowhere is this more noticeable than in the apparent shading off between what is called the reflex action of the nervous system and those conscious and voluntary actions which are the product of mind. This kind of action has been much spoken of of late, and without knowing something of this we cannot understand ourselves.

This automatic and reflex action is of different degrees. There is, first, that which originates in the system of nerves that is called ganglionic, and that is wholly involuntary. With no knowledge or consciousness on our part the ganglion, or nervous centre connected with the heart, takes cognizance of its state when full, and by a reflex action originates the movement of contraction. In the same way the enlargement and contraction of the pupil of the eye is regulated, and also the processes of digestion and secretion and assimilation, with the muscular movements they involve. In all these there is an adjustment of movements and a conspiring of means to ends that are admirable, and such a simulation of intelligence and volition that not a few have referred these movements, and so the up-building of the body, to the unconscious operations of the soul.

But however this may be, we have, in the second place, that reflex action which is connected with the voluntary muscles. It was in connection with this that the constitution of the nervous system as double, and also the different functions of its cineritious and fibrous portions were discovered. This may be illustrated thus: —



If we suppose the straight line A to represent the spinal column and the lines B and C to be nerves passing out from it, as there are nerves on either side passing out between each two of the vertebræ, then it is found that the nerve is composed of two parts, one originating on the back side of the spinal column, or rather from its centre, and passing out separately by distinct roots, the other originating on the front side. The one originating from the centre springs from the cineritious matter, and has upon it, before it reaches the other portion, an enlargement or ganglion. These portions unite in the common nerve and become undistinguishable. Still they perform different functions. The part with the ganglion upon it is found to be the nerve of sensation, and the other the nerve of motion. This is ascertained by experiments upon animals in which the roots of each are severed. If one be severed all power of motion will be lost while the power of sensation will remain, if the other be severed all power of sensation will be lost while the power of motion will remain. It sometimes happens in paralysis that there is the power of motion without that of feeling, and the reverse. We have thus what resembles a railway with a double track. One portion of the nerve, called the afferent, brings in the impression from without; and the other, called the efferent, responds by originating motion from within. Motion thus produced in the voluntary muscles without consciousness or volition, is called

reflex action. The centre of it is the spinal column and the medulla oblongata, and its object is to guard the body in sudden emergencies, and to relieve volition from unnecessary burdens. Some motions originally of this kind, as winking and breathing, may be controlled in a measure by the will; while others, originated by the will, but often repeated, are supposed by some to pass out of consciousness, and to become wholly reflex. These are such as walking and playing on a musical instrument. Certainly there is a wonderful blending of action from forces merely vital, and from the action of mind by intelligent volition; and it is often difficult to say where one ends and the other begins.

We now pass to the Mind. And first, has mind a separate existence? Is it something distinct from matter? So far as I can see, we have as much evidence for the existence of a permanent thinking thing that is separate from matter as we have of a permanent hard thing that is matter. Of the essence of either matter or mind we neither have, nor can have, any direct cognizance. That the phenomena of each have an underlying essence, or substance, we know by the laws of thought. We know that there can be no phenomena without a cause, and since the cause cannot be nothing, the cause of both physical and mental phenomena must be some *being*, some thing. But how do we know

that the cause of mental phenomena is not matter? Because mental phenomena are different from those of matter, and so different that they are not compatible with its laws. How do we know that a stone is not a fluid? Because the phenomena it exhibits are incompatible with the laws of fluidity. In the same way the phenomena of mind are incompatible with the laws of matter. The first law of matter is that of inertia.[1] This is, that matter will continue in a state of rest or of motion, whichever it may be in, without change of state, unless that change be produced by something outside of itself. It is true that all bodies are in motion, but that does not conflict with the law, for they will continue in motion precisely as they are unless they are affected by some external force. According to this, matter cannot become a cause except as it is an effect. What is called a second cause it may be, for the precise difference between a first and a second cause is that a second cause is first an effect, and so an effect as to be necessarily determined. It would be contradictory to this fundamental law to suppose it to be an originating, or proper cause. It can have no voluntary action. But mind knows itself as acting voluntarily, and as a proper cause. It is an essential difference between mind and matter that one is self-active and the other is not. Mind acts from within by an energy of its own, and not simply as it is acted upon from without. Matter, under the same cir-

[1] See *Psychology, Human and Comparative*, by Dr. Wilson.

cumstances, must always act with the same degree of force. This follows from the law. With mind we know that this is not so. I can use this stick with one degree of force or with another, with no reference to any fixed law or external force. It is in this power of mind to originate motion, and not only to direct force, but to increase or diminish the amount put forth, that we find a sufficient reason for putting mind in a different order from matter. Call matter force if you will, though what force can be without some being that has force I do not understand; but call it so, and it is a force that can originate nothing, can direct nothing, can modify nothing except as it is modified, that has neither spontaneity nor volition, and can in no sense be a proper cause. Origination, causation, modification, and direction belong to mind. Mind, in short, is the cause of its own actions, and acts from reasons. Matter is not the cause of its own actions, or rather movements, and acts from causes in distinction from reasons. Or if we take any other law of matter or of motion, as, that action and reaction will be equal and in contrary directions, we shall find that it is wholly inapplicable to the phenomena of mind. As applied to them its terms are without meaning.

Since then the phenomena of mind are not only wholly different from those of matter, but are incompatible with its laws, we conclude that they have a different basis. We conclude also that

that basis, whatever it be, is a permanent thing. It is something underlying phenomena, and if I do not know it to be permanent, then I do not know that any thing hard is permanent. How do I know that this desk is the same hard thing that was here last Friday night if I do not know myself to be permanent? I cannot know it. Therefore I have the same evidence of something in myself that is permanent, that has thought and affections, and that we call mind, as I have of something out of myself that is permanent and hard, and that we call matter. Certainly my evidence for the phenomena of mind is as good as that for the phenomena of matter, since I know the phenomena of matter only through those of mind. That those phenomena have some permanent basis is as certain as the laws of thought, and that the basis of one is different from that of the other we infer not only from the difference of the phenomena, differing as they do in their nature, lying in a different region, and made known in a different way, but also from the incompatibility of the laws of matter with the phenomena of mind. Either physicists must give up their own definitions and laws, or must concede to the phenomena of mind a different basis from those of matter.

Of mind as thus existing we say that it manifests itself in three forms, and that these follow the law of conditioning and conditioned already spoken of, thus, —

WILL.

SENSIBILITY.

INTELLECT.

As philosophers universally regard it now, these are the general divisions of the manifestation of mind. I remember, and others here may, when the division was into the Intellect, or Understanding, as it was then called, and the Will. The Sensibility, as that which moves the Will, was classed with it, but now the division is as I have stated, and in the order in which I have placed the powers.

For a rational being this is clearly the natural order. As rational, such a being can have feeling only as he has knowledge, and he can put forth choices and volitions only as he has both knowledge and feeling. This is the universal law, and this is the order.

Here, however, it must be noticed that the Sensibility as used in this connection does not include Sensation. This is from the state of the body and mind as mutually related. After the body is revealed to the mind, sensation is known by the mind as from the body. It is known as it is in itself, and as indicative of something beyond itself. It is the connecting link between mind and matter. The mind is, indeed, affected by it, but its initiative is in matter, and because it is so we leave it behind us as capable of existing in connection with animal life only. At any rate, whatever may be

said of it as belonging to the Sensibility in a broad sense, it is widely different from those affections and emotions which belong to man as intelligent, and which are possible only on condition of the action of the intellect.

Here then, we begin again, as we did before, with that which is lowest,

THE INTELLECT.

It may, perhaps, seem strange to some that the Intellect should be placed lowest, but it belongs there; and the order in which I have presented the different parts of our nature presents, as I suppose, the order of progress of the race when it has been reduced to a savage or semi-barbarous state and would rise again. At first men worship strength of body, physical energy. The man who had the greatest power of muscles was the hero. Even yet there are many with whom physical prowess is the great thing, and who hold those who manifest it in higher esteem than any others. The next step is the worship of intellect. Disputants and intellectual prize fighters become heroes. Great debaters, pleaders, orators, writers, become the great men irrespective of character. This is our present state. No nation has yet got beyond this. In our literary institutions it is chiefly the intel lect that is educated, and in some of them more and more, with little or no systematic regard for the training of the higher powers. No doubt the

time will come when this state of things will be looked back upon as we now look back on the ascendency of physical force. Until the Intellect is placed by the community where it belongs, and made subordinate to the Sensibility and the Will, we shall find that mere sharpness, shrewdness, intellectual power, and success through these, will be placed above those higher qualities in which *character* consists, and success through them. The Intellect is simply instrumental, and belongs where I have placed it.

The proper business of the Intellect is to know. This operation of knowing may take place without willing. Whether it ever does without feeling is not so certain. We can, I think, imagine the Intellect as contemplating certain subjects, say the existence of space, or a mathematical proposition, in a perfectly dry light, with no feeling whatever; but if not, we can treat of it separately, as of length without breadth, and as we often do and must of things which we can conceive of separately, but which do not in fact exist apart.

You will remember I said in the last Lecture in regard to the body that there were three questions to be asked, — First, What is there in any particular part of it? Second, What function does it perform? and third, *How* does it perform it? And so there are three questions to be asked with respect to the Intellect.

First, What is there in the mind regarded as Intellect?

Second, How came it to be there? And

Third, What operations can we perform with it, now that it is there?

These are the three questions which we need to answer; and if we can answer these three questions we shall know all that we need to know about the Intellect.

The two questions in relation to what there is in the mind, and how it got there, cannot be treated separately. They blend together. But we need to know the answers to both, and in treating of them as thus blended, we treat of the famous question of the origin of Knowledge. That has been one of the most famous questions among philosophers in past times, and it is that that we propose to consider now.

In doing this we suppose the Intellect to be unfurnished, but then we suppose it to be Intellect. As such we suppose it to have the capacity, the power, to know, for this is the function of Intellect. If there be not in it an original power to know, then it is not Intellect. Of the origin of this, or any other original power, we know nothing. We simply know it to be because it manifests itself, and, plainly a power of knowing can manifest itself only by knowing. So we begin by knowing; knowing something. What then is it to know? I agree with President Porter as he puts it in his book on The Intellect, that to know is to be certain of something. If you have

not certainty there is no knowledge. It is mere belief or opinion. To know is to be certain. But certain of what? Of the existence of that, whatever it may be, concerning which we have knowledge. It is absurd to suppose that we can have knowledge of that which does not exist. To know also involves a knowledge by himself of the existence of the being that knows. Certainly if a person is not certain of his own existence he cannot be certain of anything else. There is involved, therefore, in knowing, the certainty of the existence of the thing known, and also the certainty of the existence of the being knowing.

And here I observe that it is a great thing for a man to find himself, and to reach certainty. It is a great thing to have the certain knowledge of anything. This we have on the authority of our faculties. The authority of the human faculties is for us, and must be, the ultimate authority. If I cannot trust my faculties I cannot trust anything. Perhaps some one would say that I might trust revelation, might trust the direct voice of God. But how am I to know that it is a revelation? How that it is the voice of God? How do I, or can I know anything except through my faculties? And if these faculties do not give me in some form, and to some extent, immediate and direct knowledge, that is certainty, then there is no hope of it anywhere. The thing is impossible. Therefore it is that I say we begin with

knowledge. We begin with certainty. If we do not we never find it. We begin with the certainty of the thing known, whatever it may be, and also with the certainty of the existence of the being that knows. If the thing known be not certain, we do not know it. If the knower do not exist, he cannot know it. This certainty of the thing known and of the existence of the knower I suppose to be given in one concrete act. I do not understand that one of these is before the other, but they come together and are mutually dependent. The knower and the thing known are each revealed by an authority that involves certainty. If not, so far as I can see, it is impossible that certainty should ever be reached. We must here find our beginning. The occasion of the first mental operation is supposed to be in the action of some one of the senses, but the operation itself is accompanied by that certainty which is involved in knowledge.

If, then, we suppose man possessed of intellect alone, he may be represented by a single straight line thus, —



Let us now suppose an object presented before him as a tree. Let this object so affect him through his senses that he becomes aware of its

existence as something different from himself, and he will know the thing, and will know himself as knowing it. In thus knowing that which is not himself he will be revealed to himself, and in this double revelation there will be involved by necessity an idea that will connect itself with every subsequent mental operation. That is the idea of

BEING.

As not given by sensation, but originated by the mind itself, we may place this on the other side of the line, and we shall have two ideas, or mental products, wholly different in their origin and characteristics. The one is the direct product of sensation. It is contingent and variable. The object might as well have been anything else. It appears and gives place to others. But the idea of being, no sense can give. It comes by the energy of the mind itself, and is present in connection with all its subsequent operations. It passes on and becomes an element in them by necessity.[1]

We have thus two sources of knowledge: one the external world, giving objects that are contingent and variable; the other the mind itself, evolving ideas when the occasion arises by the necessity of its own constitution.

We inquire then, for we are now furnishing the mind, what other ideas it gets, not as the product of the senses, but from the mind itself and by necessity; and I ask you whether it is possible that

[1] See Appendix B.

the Intellect should have the notion of a tree and not know that it is in *space*. We put down, then,

SPACE.

By the constitution of our minds the idea of a tree, or of any other material thing not in space, is impossible to thought. This idea of Space therefore will be present, and accompany all perception of material objects, as that of being must be present and accompany every operation of the mind.

What next? You look at the tree, you repeat your observation. I ask you whether it would be possible thus to make two successive observations without having the idea of

TIME.

Thenceforward no thought, no event, no change can any more occur that shall not be known as in time than a material object can be perceived and not be known as in space. The idea will accompany you in all your thinking.

Succession gives occasion for the exercise of memory, and I ask you again whether it is possible for any one to say I remember, and not have the idea that he, as remembering, is the same person that in time past knew the thing that is remembered. Of necessity he must know that. He does not know it by consciousness alone for consciousness does not take cognizance of the past. He knows it immediately and necessarily on the joint

operation of consciousness and memory. Hence we put down as the next idea that of

PERSONAL IDENTITY.

We proceed: I ask whether it would be possible to observe different objects or successive events without having the idea of

NUMBER.

If not revealed to the mind distinctly as number in the first instance, it is yet so involved in all repetition, and especially in the presentation of different objects, that it enters in by necessity, and becomes a part of the furniture of every rational being.

Once more: in noticing different objects of the same kind, would it be possible to avoid having the idea of resemblance, and its correlative, difference? Therefore, from the first, the idea of resemblance enters in and travels along with the mind as the basis of all its classifications, and so of all science. Our next idea therefore is that of

RESEMBLANCE.

Besides the ideas just mentioned it is claimed that those of Substance, of Motion, and of the Infinite belong here. In respect to substance my only question would be whether the idea of it does not so come under that of being that we need not give it a separate place. As to motion the ques-

tion is whether it be not directly apprehended by the senses. If not, it belongs here. But what shall I say of "The Infinite"? This seems to me to be a mere generalization, like "The True," rather than an original and necessary idea. That we have the idea of infinity in connection with that of space there can be no doubt. When the mind has completed its intuitions in regard to space, it is as certain that space is infinite as that it is at all. Let the occasion arise and the idea comes by intuition and necessity. It can come in no other way. Frame to yourselves any conception you please of distance, and it does not approximate infinity. Suppose a flash of lightning to go on for a thousand years, it would be no nearer a limit than when it began. Of space it may be said, as has been said of God, that its centre is everywhere, and its circumference nowhere. And the same of duration. Go back as you will, and you are no nearer a beginning. Hence it has been well replied, when it has been asked why the world was not created sooner, that it was created as soon as it could be. This is true, for at whatever point it might have been created the same question might have been asked. But the infinite which we reach in connection with extension is different from that which we reach in connection with duration. The infinity of space is one thing, that of duration is another. The infinity of being, or of attributes, would be still another thing, and wholly different.

The term infinite cannot be applied to either the intellectual or moral attributes of God in the same sense as to space and time. In strictness it can be applied to nothing that admits of degrees or limitation in any respect. But "The Infinite" must cover all cases in which the term infinite can be applied. Hence it must be found by comparison, and we shall always be entitled to ask, The Infinite what? This form of expression has its place and use, but like "The Unconditioned," and "The Absolute," it is so remote from ordinary lines of thought and so vague and hazy that it has special fitness for use when men would "darken counsel by words without knowledge."

Precisely what the ideas are, and all of them, that are thus originated by the mind itself, though occasioned by the senses, it is not important to settle; but it is important to establish the fact of such a class of ideas, and to understand their nature and functions. How little the senses, or anything that can properly be called experience, has to do with the origin of those mentioned appears from the fact that but a single object is needed for them all. The taper is lighted and it burns.

I will now place before you, on the left of the line, and in the order given, the ideas we have considered.

Resemblance.	
Number.	
Personal Identity.	Products of the Outer and Inner Sense.
Time.	
Space.	
Being.	

It will be observed that I have spoken hitherto only of ideas that are necessary. But besides ideas there are also Propositions which are so immediately connected with the ideas as to be necessarily true. This body is in space. That proposition is true, and seen to be true by a necessity equal to that by which we have the idea of space. The swaying of that branch is in time. That is a truth which no man can deny. To deny it would be an absurdity. I will tell you what an absurdity is. It is something that is opposed either to a mathematical demonstration, or to one of these first truths or original intuitions. Anything opposed to either of these is an absurdity, and that which it is impossible for the human mind to believe.

In the ideas and truths now presented we have one part of our mental furniture, and we see what its origin is. It originates in the mind itself, and is that part of its furniture which is common to all men. These ideas and truths are as the bones of the mental skeleton. They are not only what all men have, but must have if they are men, and they abide permanently in the mind. Other ideas come and go as guests. These keep the house.

But if there are such ideas and truths you will want to know how they are to be tested. The test of the ideas is that they are necessary, and also universal in human consciousness. They are universal because they are necessary. The test of the truths is that they are necessarily and univer-

sally believed. Another test sometimes given is that they cannot be proved because no truths plainer than themselves can be found with which to prove them. Another test of these truths is, that if a man denies one of them he must act as if he believed it; and that other men, let him deny it as vehemently as he will, have a right to treat him as if he believed it. There is nothing that somebody has not claimed to disbelieve, but this will be a test. Let any one, for instance, claim to believe that he does not exist. I should like to know whether he is not compelled to speak in order to make the denial, and whether that would not be acting as if he believed that he did exist. Or, take the belief in personal identity. Suppose a man to deny that, and to make a plea on that ground before a judge. Suppose him to say: "My body changes once in seven years. According to the physiologists not a particle of matter that was in it seven years ago is in it now. I believe that, and as I am a materialist, I believe that my mind changes in the same way. I do not believe that there is, or can be any such thing as personal identity. It is true some one bearing my name committed the murder eight years ago, but to punish me would be a case of mistaken identity, and unjust." Would the judge admit the plea? Would he admit it himself in the case of another man if that man owed him a debt? You know that no sane man could believe that. If we

could possibly suppose any one to believe it, we should say that he had lost his reason, and was no longer to be treated as a rational being.

I have dwelt on the above because I wish to show that there are certain elements and truths that belong to human nature, and that mankind believe in with absolute certainty. In these days, when it would sometimes seem as if the foundations of belief were to be utterly unsettled, I wish to have it understood that there are some things that all men believe, and must believe.

We are now prepared to see the distinction between *à priori* ideas and those of experience and also between priority in the order of time, and in the order of nature.

The term *à priori* has been applied to those ideas which originate from the mind itself on the occasion of experience; while ideas of experience are those, as of external objects, which are derived directly from the senses. The term is not a happy one, but we may see how it arose. The mind must itself exist prior to experience, and as the capacity and necessity for forming these ideas exist with equal priority as a part of its constitution, the ideas themselves are called *à priori*.

The distinction between the priority of nature and of time has been much insisted on by some philosophers, and is worthy of attention. Sensation is supposed to be first. I see a body, and

have knowledge of it as such. That is first in the order of time. But in connection with knowledge of body I have by necessity a knowledge of space, and now I see that space must have existed in the order of nature before the body. It must have existed as a condition, not as a cause. So a man perceives an attribute. That is first in the order of time; he then knows at once that in the order of nature the substance must have been first. It is in this way that a part of *à priori* ideas are distinguished from those of experience.

I will simply say in closing that I entered upon this course of Lectures as an experiment, in the hope of making what is commonly called metaphysics somewhat plain. In considering the ideas and truths which have been our subject to-night, we have reached that field, and I ask you if they are not plain. In one aspect of them they are the plainest things possible. Everybody knows them, and not only so but always has known them, and could not help knowing them. The ideas all men have, and the propositions are such as nobody thinks of denying except a philosopher, or possibly a fool. In another aspect, however, they are not plain. But this comes from their central position, and from that certainty about them, and familiarity with them, which are such in the mass of men as to prevent curiosity about

them, or even thought. If their relations are obscure, and their analysis difficult, it is for the same reason that it becomes more difficult to demonstrate a mathematical proposition as it comes nearer to being a self-evident truth.

LECTURE IV.

THE REASON. — THE SENSES, EXTERNAL AND INTERNAL.

BEING, Time, Personal Identity, Space, Number, Resemblance. The ideas expressed by these words I suppose belong to all men. They are the common furniture of the mind, so that we see now what one part of its furniture is. We also see how they come. They are the product of the Intellect itself, and of that alone, revealing itself uniformly according to its own law. They are occasioned by sensation, but are in no proper sense its product, since they are the same whatever the sensation may be, and, with the exception perhaps of Space, might all be given from odors merely that would give no idea of an external world at all. So little, indeed, is the mind in this department dependent upon an external world, that it might, from the sense of smell alone, make comparisons endlessly, and evolve the whole science of numbers.

And not only do all men have these ideas, but they all believe equally those propositions which affirm their necessary relations. And not only do they believe them, but if any one denies them

in words we have a right to assume that he is disingenuous, and to treat him as if he believed them. Amidst the uncertainties of life it is pleasant to find something that is certain, amidst the Babel of opinions, a ground of common belief.

Having then this class of ideas, what name shall we give them? Some have called them intuitions; some, primitive ideas; some, fundamental laws; some, rational instincts; some, innate ideas. Each of these names points to some characteristic or function of the ideas, and their number is indicative of the many-sidedness and importance of ideas that can be so variously named. The term innate, at one time much used, points to the origin of these ideas in the mind itself, but is not correct. They are not born in us, but, as we are born with eyes so that when the occasion is given we see, so we are born with a capacity of forming these ideas, so that when the occasion is given we form them of necessity.

But if the ideas have been variously named, so has that power of the mind by which they are given. Some have called it a faculty. It is not properly that. The mind is said to have different faculties, not that it is constituted of different parts as the body is, but that it has the power of acting in different ways that can be distinguished and named, and its power of acting in each of these ways is called a faculty if it be under the control of the will. A faculty is a power that is

under the control of the will. If not under such control it is not properly a faculty. We have, for instance, the faculty of speaking, but not that of circulating the blood. We do not say that, because the will has no power over it. In the same way I would say that the mind has not the faculty of forming these ideas, because it forms them by necessity.

With these remarks about a faculty, and what it is, which will serve us further on, I observe that some have called the power which gives us these ideas Reason, or, The Reason. Hamilton and others object to this as ambiguous, and so it is. Reason is often used to signify that power by which we carry on the process of reasoning, which is entirely different from the power by which we gain the ideas that render reasoning possible, and in the gaining of which there is no process. This ambiguity is especially misleading from the similarity of the words, reason and reasoning; for what is the power by which a man should carry on a process of reasoning if it be not reason? There is no reasoning in obtaining these ideas, and the power that gives them is not more used in processes of reasoning than in other processes. Still, as reason was the word used in Germany, and was introduced by Coleridge into England in the days when transcendentalism was something mysterious and was rife, it has been more used in England and in this country than

any other. But then, while its connection with the word reasoning, and its general use for all the powers of man in distinction from those of the brute, furnish a reason why it should not be used, its connection with the word rational, furnishes a eason why it should. As I have said, if a man deny any one of the truths involved in these ideas, or fail in any way to act under their regulative influence, we say that he has lost his reason, and surely that must be reason which a man has lost when he ceases to be rational.

Another term that has been used is Common Sense. That was used by Reid and the Scotch philosophers, when they felt the need of going back to first principles in order to meet the skepticism of Hume. They called that which gives us this class of ideas Common Sense, because the ideas belong to all men. And that was a good reason; but here again the term was ambiguous, and, as in the other case, preoccupied. Common Sense was then universally taken to mean, as it does now, that perception, apparently without a process, by which the average man comes to apprehend the common relations, and to conform himself to the common proprieties of life. The judgments formed in this way seem to be instantaneous and intuitive, as those of distance, or, as those formed through what is called tact in any particular business when once the tact is gained, but they are not intuitive. They are the result of a process. Understood in

this way, common sense is something that may be acquired, and in which men may be improved, but simulating intuition as it does, the ambiguity was unfortunate. The difference was not generally perceived even by philosophers; and Priestley, and the English generally, ridiculed the Scotch for turning philosophy over to common sense.

Intuition has also been used to indicate the source of these ideas. This is the term preferred by President Porter. It indicates the immediateness and necessity of the knowledge we gain by it. The difficulty with it is that we have other intuitions, as those connected with the operations of the senses and with mathematical reasoning.

Hamilton called it the Regulative Faculty. This points to the office of its products as accompanying and regulating all the other operations of the mind. The difficulty with this is, that it is not a Faculty at all, as not being under the control of the will.

By some German writers Faith has been used in this connection, and also by Sir William Hamilton and Dr. McCosh. By them all it is spoken of as a special faculty or power. Hamilton says: "Faith — Belief is the organ by which we apprehend what is beyond our knowledge;"[1] and he refers our belief in the Infinite to that. Dr. McCosh does the same, but makes it more general. He says: "It is that operation of the soul

[1] Lect. xxxviii

in which we are convinced of the existence of what is not before us." Also, that "It is a native energy of the mind quite as much as Knowledge is."[1] It is much to be desired that this term should be freed from its ambiguities, but this can never be while it is used to signify any operation of the pure intellect, or, if you please, with no reference to any estimate of persons. As related to Faith, the operations of the Intellect are of two kinds. They either give us certainty or they do not. If they give us certainty, that is Knowledge, and not Faith. If they do not give us certainty, then we have mere belief, or opinion, and the reasonableness of the belief or the value of the opinion will depend on the evidence on which it rests. Is, then, our assent to a proposition when there is more evidence for it than against it Faith? Certainly not. If any one is certain from the operations of his own mind, or in any other way, that there is such a thing as what we may please to call the Infinite, then he knows it as he knows other things. And if so let him say so, and not run the whole subject into mysticism by attributing it to a mysterious principle called Faith, and then opposing Faith to Knowledge. Faith as an energy or principle can neither be opposed to Knowledge nor compared with it, for Knowledge is a result. There is properly no faith till we bring in the element of confidence in

[1] *Intuitions of the Mind*, p. 419.

a person. If we believe a thing because a person says so, there is faith. Into the confidence we repose in a person there enters an element of choice and of will, which can have no place in any operation of the intellect alone in any of its forms, and without that element there can be nothing that ought to be called faith, or that can be, without introducing confusion.

What name then shall we adopt? On the whole I prefer the term Reason, as giving us the term rational — not reasonable, which is quite another thing — and would say that the ideas and truths of which we have been speaking are immediately given, or intuitively apprehended by the Reason.

We next inquire after the function, or office, of these ideas and truths. As elemental and conditional for all mental action, and for the action of brutes as well as of men, their office is low, just as that of gravitation is low. Certainly the brutes know these, so far at least that they are assumed in their actions. The only question is, whether they consciously recognize them as elements, and as involved in all that they are and do. And because they are thus elemental no proposition or knowledge respecting them can ever be directly practical. In the practical question, What is the cause of this particular sound? it is assumed that the sound had a cause, that that which caused it had being, that that being was in space, and that

the causing of it was in time. Neither can we make direct use of these ideas and truths as proving anything; but without them the propositions necessary for proof could not be framed. They have been well compared by Stewart to the lime that cements the sand in mortar, or to the vincula in a chain, where the links that produce the extension do not interlock. Being given by an involuntary process they can be neither proved nor disproved, but are assumed in every proposition that can be thus dealt with. Not being the product of experience, except as we must have experience in order to know anything, they make experience possible and valuable; they give it coherence.

With so great a difference in the origin and office of that furniture of the mind which is on the left side of the perpendicular line I have drawn, we should expect to find a similar difference in its processes — in the mode and result of its working. We should expect to find such a difference that they ought not to be called by the same name. And that we do find. It seems to me unfortunate that such terms as generalization, and induction, should be applied to mental acts that have their beginning, and middle, and end, in intuition and certainty. Generalization and induction may take place on the right side of the line, but that which characterizes them there is wholly wanting on the left side. All proper generalization proceeds on the ground of similarity and comparison, but there

is no such ground for the movement on the left hand side. In all proper induction as we have it on the right side of the line, the conclusion becomes more certain by the bringing in of repeated instances; and if, in this way, certainty can be reached in any case, yet necessity never can. But on the left side the certainty is as great at the outset as it can ever be, and whatever is affirmed as true is seen to be so by necessity. But radical as this difference is, able men continue to apply the same terms to mental acts on both sides of the line, and thus confound things that differ.

But if there is no generalization or induction on the left side, what are the mental acts that take place? It is conceded that we first gain truth in the concrete. Our first affirmation is, not that space is, separate from body, but that the body is in space. What then is the process by which we come to the knowledge that every body is in space, and must be? Not by comparison, or generalization, or induction, but by what I should call *extension* — an extension to all subsequent cases of the same intuitive and necessary judgment that we had to begin with. That every event has a cause is no proper generalization gained by comparison. It is a proposition assented to by the same necessity as the particular truth, as soon as the meaning of the words is understood. But induction, unless it be by complete enumeration, which is frivolous, does not give necessity. The

same is true of the affirmation that every event must have a cause, and of the infinity of space. When the occasion arrives for the mind to affirm these, it does it by an intuitive judgment similar in nature and authority to those which had gone before. The time may be delayed, the occasion may not come, but if it does come the judgment is intuitive and necessary.

But the word, *being* — is not that general, that is, formed by generalization? Not as here used. When I affirm for the first time of a body, that it *is*, or exists, or has *being*, I have received a specific, necessary, permanent element in my mind that I am compelled to carry with me in all my thinking. I am brought, either actually or potentially, face to face with a mystery that never can be solved — the mystery of being. That something *is* I know, but can never know how anything came to be. Is it said that there is nothing in nature that corresponds to the term being? It may be replied that everything corresponds to it in such a sense that we are compelled to affirm it of every new object. But is not this term, being, the very one made use of to express the highest generalization, the *summum genus?* Yes, but that is only because, at that point, all that has been gained by experience is dropped, and nothing is left but that with which we began.

You will see then that I would separate broadly in their origin, and characteristics, the products that we find on the left hand side of the line from

those on the right. Until that shall be done, I do not think that metaphysical subjects can be treated of with clearness. In nearly all metaphysical treatises these products are considered last, but I always thought, if I were to write a book on mental philosophy, which I never expected to do, I would place them first. They are first in the order of nature, they are the lowest and most elemental, they are involved in all the processes that come after, and are needed to explain them.

Having thus considered the mental acts and products on the left hand side of the line — our rational intuitions, so far as the intellect alone is concerned, we pass to those on the right. Here we find Sensation, and Perception, through which we gain a knowledge of an external world. By sensation we mean the result in consciousness of any affection of the sensorium. It is a state of mind produced through the sensorium by something acting upon it that is independent of the mind. By perception we mean that knowledge which we gain of external objects through sensation. Sensation is what it is felt to be. It is our own state in consequence of action from without. Perception is a knowledge of the being and state of something without ourselves in consequence of action from within. What then is it that each sense gives? and how is it that through the senses we get a knowledge of an external world?

On these points I do not agree fully with the more prominent writers. They are points on which you are all qualified to judge. My object will be to bring the subject fairly before you, stating my own opinion. In doing this, perhaps I cannot do better than to take each of the senses separately, and inquire what that would give acting wholly by itself. In doing this, however, I must premise the difficulty there is in making this abstraction perfectly. From the first the senses have acted together, and it is most difficult for us to imagine the isolation and poverty of one wholly alone. A full appreciation of this would, I cannot help thinking, have modified the opinions on this subject of some able thinkers.

Let us take, then, the sense of smell, for that is the simplest, and what does that give? Suppose a man organized with no sense but this. His mind is entirely vacant, as not yet awakened by any sensation. There comes to him an odor. What would he know in consequence of that? Would he know that there was an external world? or a sensorium? or any being besides himself? Yes, says President Porter. According to him, "Every sense gives the knowledge of an extended non-*ego*." [1] Others agree with him. I can only say that it does not seem so to me. I think the man would suppose the sensation to be a feeling which arose in him spontaneously, as thought does

[1] *Human Intellect*, p. 133.

He would have no feeling, no eyes, no touch, no motion. His own existence as modified by the sensation he might know, but what one property of matter, or of space as external to himself, could he know? This is a simple case. It seems to me plain, but if it be not so to others there is no way of making it plainer.

The sense of taste is allied to that of smell by the proximity of the organs, and the similarity of the sensations they give. They differ in that taste is always associated with touch; smell never. But this is incidental. It is because the nerves of taste and of touch are inextricably blended. But there is a nerve of taste just as there is one of smell. That nerve gives taste and nothing else. Touch it, and there is no response. If, therefore, this nerve could act by itself, taste would be nothing more than a smell in the mouth. It would be a sensation, which is what it is felt to be, and nothing more, and could not be interpreted as a sign of anything external and beyond itself.

But hearing — how is it with that? Here again, there is no touch, and the sensation, by no agency of ours, and simply as a sensation, comes and goes. With no other agency, standing wholly alone, I do not see how the mind could reach anything through this but the sensation.

Up to this point I should not be surprised if many, perhaps the most of you, have agreed with me, but we now come to sight, and most people

believe that by means of that we come at once to the knowledge of an external world. Do we? Sight is like smell and hearing in not being associated with touch. It gives its own product, and that alone. It differs from those senses in our having direct control over the organ. We can move the eye by itself, and so control and modify the sensation it gives. Here, I think, lies the main difference on the point in question between this sense and the others. If an eye were set in stone, and held fixed what would it see? Color, certainly. Some say form. But form of what? Nobody supposes that the eye originally gives form in more than one dimension — that we see a globe or a cube as such. It could be then but a colored surface. But under those circumstances what could be known of surface or extension? Could the form be anything more than the form of color, and would that be known as form at all? I think not. To me it seems that there would be, as in the other cases, sensation and nothing more, something purely subjective. The sense would not perceive or recognize itself. No sense does that. It presents its object and nothing else. In the case of the eye I think that would be color, and that only.

We next come to touch. Of course when we touch a thing we have it. Yes, when *we* touch it. But suppose *it* touches us. Suppose, as before, the whole organization to be encased in stone except

the point of a finger and then that something should touch that point. It must touch merely, not press it, for touch is to be carefully distinguished from pressure. Suppose this, and what would you have? A knowledge of anything but a mere subjective sensation? I think not. You would have all there is of the sense regarded as passive, and it would be as little likely to give us externality, or anything that can come under the definition of matter as the sense of smell.

I think a mind thus situated would be in hopeless perplexity. If, however, the senses thus acting would give the knowledge of space and of some being besides ourselves, they would not give us a knowledge of matter and of the material world.

If, then, we do not get a knowledge of the external world by any one of the five senses, acting singly, or by them all acting together, how do we get it?

My view on this whole subject can be briefly stated. I have spoken of sensation as originating in a movement from without inward, and of perception as originating in a movement from within outward. This gives us our principle, or rather principles, for there are three propositions that we need to state.

The first is, that whatever originates from without by no agency of ours, and is communicated to us by a movement from without inward, is known

as subjective, that is, as a mere sensation, and would give us no knowledge of an external or material world.

The second proposition is, that whatever resists, or in any way modifies, a muscular movement voluntarily put forth, that is, a movement from within outward, is known as objective, and would reveal to us an external world, the resistance of course being known through the general sensibility as distinguished from the sense of touch. In the one case we have simply action from without, in the other reaction. And this makes a great difference, for we thus get the two forms of our life, as passive and active. In the first we know ourselves as in a state that has come by no power of our will. In the second we know ourselves as agents, and thus, and thus only come to a knowledge of our proper selves. This knowledge of ourselves as agents, and of that upon which we are to act, I suppose we gain at the same time by one concrete act. At this point we come to the knowledge of opposing forces and to the beginning of the struggle of life.

The third proposition is, that after thus gaining immediately and necessarily a knowledge of matter, that which is subjective, all mere sensations, become signs the significance of which we learn by comparison and experience as we learn a language.

These propositions I give you as my opinion, but without the time, or indeed the wish, to illustrate and defend them. They are simply an opin-

ion, as I do not remember what happened so long ago. Many do not receive them, and will not. Perhaps the more prevalent opinion is that in all sensation we know the sensorium as an extended something distinct from ourselves with which we yet act in conjunction, and that subsequently we gain by experience a knowledge of the other parts of the body, and then of a world wholly beyond ourselves! The questions at issue here I do not regard as of great importance provided we are allowed to gain, in some way, an immediate knowledge of an external and material world.

The third of the propositions just now stated was that all mere sensations are signs, the significance of which we learn as we do a language. This many will not accept in full, but they do and must accept it in part, as it is illustrated in what are called

THE ACQUIRED PERCEPTIONS.

This brings us to an interesting subject and I will say a word upon it.

Nothing is more admirable than the economy of the senses, and by this I mean the small capital with which they begin compared with their ultimate wealth. One reason of this is that each borrows from all the rest, and often in such a way that it is hard to distinguish between the borrowed and the original capital. I have already spoken of sight in this aspect. This is the richest of the senses, and like most rich men in this country, began poor. It had originally nothing but color,

or at best form in one dimension, but it immediately begins to borrow, and especially from touch. Much the larger part of what sight gives us was originally from touch. As has been said, it is only by touch that we know a globe to be a globe, a cube a cube, or any solid body to be what it is. In the same way also, and so only, do we originally know hardness, softness, roughness, smoothness, fluidity, viscidity, heat, cold, and yet all these are given by sight, and in such a way that most people do not know that they have not always been given by it. Sight does, indeed, become a more extended touch, so that by it we can know, as by intuition, and seemingly by direct perception, the tangible properties of distant objects. We can see that the polished marble is smooth, and the file hard and rough, that water is fluid, and tar sticky, that molten iron is hot, and snow cold.

So too sight borrows of the other senses, but not so extensively. We see that the rose is fragrant, and the bell sonorous, and that sugar is sweet. With some persons the sight of a nauseous object acts as an emetic. They see that it is nauseous. And not only does sight thus borrow from the other senses, it appropriates, and ultimately presents as its own, the products of the judgment. This is true of distance. It seems settled that some animals have an intuitive knowledge of distance. Chickens strike their food at first with the same precision as afterwards. It seems equally

settled that man has not the knowledge of distance in this way. He gains it by a process, or rather by certain processes, in which size, and distinctness, and intervening objects, and probably the movement of the eyes as affecting the angle of vision, become elements; but these processes become so familiar that we disregard them, and notice only the result. That seems to be given at once, and as the immediate product of sight. Most persons would say, perhaps all who have not reflected upon it, that the knowledge of distance is as immediate as that of color which we seem to see in the distance. And as we gain by sight a knowledge of distance that seems immediate, so do we of the thoughts and emotions of others. What we see is the flush on the cheek, a slight change of color merely. What we think of is its cause as it reveals, it may be an emotion, it may be a purpose. But all this is by acquired perception. It is the knowledge of one thing by means of another, and not direct knowledge We have learned it precisely as we have learned the meaning of words and of letters. The signs by which we reach it are a language, and the earliest language learned. It is this very early acquisition of the language that sinks its signs and processes so far out of sight; indeed, attention to them would defeat the end for which the language was given.

As was said, sight is the largest borrower, and we have seen what vast wealth it gains in this way,

but the other senses are not slow in taking up the same method. By hearing we come to know direction, and distance, and form. The voice of a friend, his footstep, his knock, brings him before us. The click of the telegraph reveals the operator three thousand miles distant. By the ear the physician can see what is passing within the body. But I need not specify further. Cases in which visible and tangible qualities are presented through smell and taste will readily occur to you. I will only add that when sight is taken away the power of the other senses to gain acquired perception is greatly quickened. It is marvellous what reach and delicacy they will then gain. It was said that Julia Brace, in the seminary at Hartford, deaf, and dumb, and blind, could distribute the clothes by the sense of smell after they had been washed.

From this extent and reach of the acquired perceptions we shall readily see how it is that the senses are deceived, or are said to be. It is from a misinterpretation of signs. Such deception may occur in connection with any set of signs, if it be possible that the sign should be present without the thing signified. So it is sometimes in a painting, in an echo, in a stick seeming bent in the water, in our own seeming motion when an opposite car moves; in the seeming motion of the heavens when it is we that move. So also it is when the nerves are so affected by disease that we seem to see sights and to hear sounds. In all

these cases the sign is present without the reality, but in direct perception this cannot take place.

After the account just given of perception, you will readily see what a *percept* must be as distinguished from a thing. This is a word that has recently come into use, but it is needed. A percept is what is given by any one sense. The color of an object as distinguished from the object is a percept. So of its hardness, or form, or odor. In a *thing*, on the other hand, we have a number of percepts combined at the same time, in the same place, and under the idea of substance. To form a thing we must have at least three ideas from the left hand side of the upright line that I drew. This stick has color, form, hardness. Each of these is a percept, but to make a thing they must be combined at one time and place under the idea of substance. To these, other percepts might be added. It might have odor and taste, and be sonorous, and all would be combined and form a part of one notion of the thing. Because our notion of the thing is gained through perception some have called the thing a percept, but this can only cause confusion. A thing is formed, or rather our notion of it, by combining in one notion the product of different senses with rational ideas. Hence, because the materials are thus gathered separately and brought together, and also because of the use made of it, perhaps I might as well say here that I call it a concept, — an *individual con-*

cept, to distinguish it from a general one to be spoken of hereafter.[1]

We have now dwelt perhaps sufficiently, on Sense-perception, through which we get so large a part of the furniture of the mind. We have seen what the furniture is which we thus get, and how we get it. But besides this there is another wide department in which we gain immediate, or presentative knowledge. We have the power of knowing immediately not only the objects around us, but also the processes and products of our own minds. This power of turning back and making the processes and products of the mind the object of his thought, of classifying and reasoning about them as about external objects, is supposed to be peculiar to man. At any rate, it is essential to him. It is the condition of self-knowledge, and of rational self-government. How else can he know what powers are higher, what lower, what are impulsive, and what governing? Rational self-government implies the ability to survey all our powers together with their objects, and not merely to know what their action is, but to determine what it shall be. Full self-knowledge requires that we know not only our motives, which pertains to character, but also our powers as they are in themselves, as they are related to each other, and as adapted to attain the end of our being. This brings us into a realm, not only wide, but of

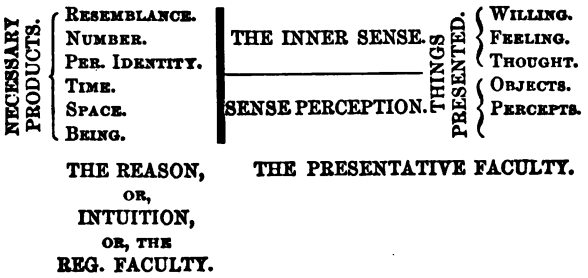
[1] See Schuyler's *Logic*, p. 17.

the deepest interest, because through this we not merely know ourselves, but also our fellow-men. So far as God has made men alike we have a right to judge others by ourselves. That this knowledge is immediate all agree. It must be, for nothing can come between the mind and its own processes and products.

But what shall we call that faculty, or form of the mind's activity, by which we have this knowledge? Hamilton calls it Self-consciousness, and so does President Porter. To this I object, first, because I do not see what consciousness of any kind has to do with one kind of knowledge more than another; and, second, because a consciousness of the operations of the mind is not a consciousness of self. The operations of the mind are no more itself than external objects are, and when the products of mind become objective, or objects to the mind, they are like other objects. Hamilton says that this power has been called Reflex Perception. This is well as putting it in contrast with Sense Perception, but it is not properly perception at all. It has also been called the Inner Sense. To this there would be no objection if we might call Sense Perception the outer sense. As it is, it is, perhaps, the best name we can give. The name is not important provided we understand the thing and it be not ambiguous, and so, misleading. It is because I think it ambiguous and misleading, that I object to Self-consciousness.

But call this power what we may, we have revealed through it an inner world more wonderful even than that which is without, — a world of intelligence, of comprehension, of feeling, of will, of personality, and of moral, instead of physical law. It is a world whose phenomena we can study and arrange as we do those of the external world; but as in the external world, the phenomena themselves must be immediately given. We must in some way intuitively and necessarily know them to be. This we do know, and we thus have our third and last department and kind of mental furniture.

We have now answered, conjointly as we were compelled to do, two of the questions originally proposed. First, what is in the mind? and, second, how came it there? The result may be presented to the eye thus, if we suppose the upright line to represent a man possessed of intellect only, and objects of sense to be presented before him.



Here we have two departments of mental fur-

niture of different origin. The first is given by Reason, or Intuition, or the Regulative Faculty, as you may please to call it. The second is given by the Presentative Faculty. The products of the Reason are few. The great mass of our mental furniture is given by the Presentative Faculty This is divided into two departments: the world of sense, and the world of mind, with an infinity of objects in each. The products on the right-hand side of the upright line differ endlessly in different minds, and we combine them in every way as we please. Those on the left hand are the same in all men. We cannot manipulate and combine them as the others. That is the region of necessity. They are given by necessity, we must have them to be men. All modifications and changes in or among themselves, whatever they may be, are by necessity; and they enter by necessity as elements into all our thinking.

We have thus three departments of mental furniture with different characteristics and laws. We have *a priori* ideas and truths; we have the external world; and the processes of our own minds. Each is necessary to the others, and all combine in giving us a rational being standing face to face with an unlimited universe which he is to investigate.

LECTURE V.

RECAPITULATION. — CONSCIOUSNESS. — THEORIES, BELIEFS, AND PRACTICAL RESULTS.

In investigating mind we have now answered two questions: first, What is in the mind? and second, How did it get there? We say that there are in the mind necessary ideas, and that in connection with them we reach necessary truths. These ideas come, not by sensation or perception, but on the occasion of them. They are given by the native power of the mind as an original source of ideas. They are not innate, but the mind is so pre-formed that it necessarily originates these ideas. The truths are self-evident and necessary. Neither the ideas nor the truths are reached by what is properly a faculty, as it is not subject to the control of the will. We call that which gives them Reason, Intuition, the Regulative Faculty.

Then we have that furniture of the mind which is gained through sensation and perception. This we have in two ways: directly through perception, indirectly through sensation. That which comes through perception I hold that we get immediately intuitively, necessarily, through that power of motion by which we know ourselves as causes, and

through that resistance of bodies by which we know them, not as causes in the same sense in which we are, but as substances. Motion originating in us presupposes a cause in us. It also implies space, and as necessarily as body does. It implies both time and space; and resistance to motion made by our own effort gives us a permanent substance out of ourselves and other than ourselves, which is matter. According to this, direct perception takes place only when there is contact, with pressure. All besides that is called perception is indirect. This knowledge some impute to what is now called the muscular sense. It comes, indeed, on the occasion of resistance to muscular effort, and is commonly confounded with what is given by the sense of touch; but sensation is not perception. Sensation is on the occasion of a movement from without inward; direct perception is on the occasion of a movement from within outward, and is an immediate recognition of substance as external to ourselves. Mere sensation, being wholly within us, with no sense of effort from within, and with no resistance or pressure from without, which is all that any one of the five senses really gives, would give us cause, whether within or from without perhaps we could not tell, but it would not give us substance external to ourselves.

You thus see that I hold to an *immediate* knowledge of an external world rationally and necessarily obtained; and also how I do this without at-

tributing it to any one of what are called the five senses. The notices given by them I regard as a set of signs to be interpreted, as a language to be learned, and not as giving us immediate and necessary knowledge except of *some* cause — not necessarily of anything without us. Not simply by sensation, but by an operation proceeding from within outward, involving the action of the mind as rational, bringing in the ideas of cause, of substance, and of space do I suppose that the mind takes cognizance by its native power of something that is not itself. I suppose the mind is thus introduced to material substance as that which it is to control, and to space as the field in which it is to control it. It is, as I think, because the proof of an external world has been made to rest on a set of signs that need to be interpreted, rather than on immediate knowledge that it has been possible, as so many philosophers have done, to deny the existence of an external world. The distinction has not been properly made between the immediate perception of substance and its mediate perception through something intermediate.

The furniture of the mind given by perception as now explained is contingent and variable. That which is in the mind of one man may differ entirely from that which is in the mind of another, so that those things which have been familiar from infancy to one may be unknown to another, or may be regarded as a curiosity. I re-

member to have heard Mr. Everett say, when he was President of Harvard College, that a boy from one of the Rice Islands of the South was commended to his special care, and that when he asked him the morning after he came what he would like to see, he said he thought he should like to see some rocks, and so he sent him over to Nahant.

Then we have, in the third place, besides the knowledge of an external world, an immediate knowledge of the operations of our own minds, of our thoughts, our feelings, and our volitions. And this again is a vast world, contingent and variable, and not the same for any two men.

These two, the outer and the inner sense, commonly called sense-perception and self-consciousness, make up what is called the Presentative Faculty, or the Faculty of immediate knowledge. Some faculty by which we know immediately and necessarily we must have if we are to know at all. When we know thus we are said to have presentative knowledge, and the Presentative Faculty is divided into those two branches or departments by which we get a knowledge of the external and the internal worlds. By these, or by this, together with The Reason, the mind is furnished, and we thus answer the two questions, What is in the mind? and, How did it get there? We thus give our solution of the vexed problem of the origin of knowledge.

Materials being thus given, the next inquiry would naturally be, what operations the mind can

perform with those materials. But there is one operation having relation not so much to the material as to the mind itself, and so involved in all the others that it stands by itself and will need to be understood before we shall be ready to go on to the consideration of what are properly the operations of the mind upon the materials given. That operation is what is commonly called

CONSCIOUSNESS.

This is not a condition for the other operations of the mind, and so needing to be considered before them. They are a condition for it, since, in the order of nature, the mind must know before it can be conscious of knowing. Nothing within the mind is, or can be, a condition of the operations of the mind but the mind itself. The condition of knowing is a mind endowed with the faculty of knowing; and the condition of consciousness is an operation of the mind of which it can be conscious.

What then is consciousness? As universal, and as thus intimate to the mind, we might suppose it would be among the plainest of all things, but instead of this there is nothing in which writers are less agreed. What then do we mean by it? Can we find a definition that will enable us to be consistent with ourselves in the use of the term? I know of no writer on this subject who has been thus self-consistent.

Whatever Consciousness may be, there are three characteristics attributed to it by common consent, and these it must have. The first is, as its etymology, *con*-scio, implies, that it can never be alone. It must always accompany some other operation of the mind, and does in fact equally accompany all mental operations. The second characteristic is that it must be infallible. It must be something that never does, or can, deceive us. In this all are agreed, for, if our consciousness can deceive us, there is nothing between us and universal skepticism. The third characteristic is that consciousness is not a separate faculty. A separate faculty has its own domain, and is subject to the will. It is not a faculty, but is involuntary; is alike in all the race; and is a necessary act concomitant with all mental acts of which we know anything. It has an equal and common relation to all the faculties.

We inquire then, first, is Consciousness, as is said by Sir William Hamilton, "the knowing that we know?" He says that consciousness differs from knowledge in this: in knowledge we know, and in consciousness we know that we know. But if the act of knowledge does not suffice to itself, it can avail nothing to have another act of knowledge back of that. No one can know without knowing that he knows, and nothing is gained by thus dividing and giving names to the two aspects of one indivisible act. But Hamilton went

further, and the main peculiarity of his view is that in being conscious that we know, we are also conscious of the thing known, or of that which the knowledge respects. Thus, our knowledge of a table, according to him, includes a consciousness of the table. He said it was absurd to assume to be conscious of knowing the table without being conscious of the thing known, thus giving us, as you see, the evidence of consciousness for the existence of an external world. This was thought important as being decisive against the Idealists and all those who deny the existence of anything external to the mind. But this is to confound consciousness with perception. If we do not have by direct perception a knowledge of the external world that suffices to itself we can never have it at all. If we do, then consciousness is not needed for that purpose.

We inquire then, again, is not Consciousness a knowledge by the mind of its own operations? That is the common definition. "The most general characteristic," says Hamilton, "of consciousness, is that it is the recognition by the thinking subject of its own acts or affections."[1] So President Porter says, "Consciousness is briefly defined as the power by which the soul knows its own acts and states." But in saying this they seem to confound their definition of consciousness with that which they give of self-consciousness, or what I have called the inner sense, regarded as a

[1] Lect. xi. p. 139.

branch of the Presentative Faculty. Hamilton says that "self-consciousness is the power by which we apprehend the phenomena of the internal world."[1] How, I ask, does this differ from his definition of consciousness just given? And President Porter says (Sec. 64): "The presentative faculty is subdivided into sense perception and consciousness, or, as they are sometimes called, the outer and the inner sense." This seems to me to be a confounding of the two by these eminent men, and I quote them only to show the need of care at this point. Consciousness has no more to do with that "knowledge of the internal world" given, according to Hamilton, by self-consciousness, and according to President Porter, by consciousness regarded as a part of the Presentative Faculty, than it has with our knowledge of the external world, since it accompanies both equally. Consciousness as much accompanies my knowledge of an external world as it does my knowledge of what is passing within myself. Here is a separate department of knowledge. It is of that which takes place within myself. Here is another department. It is of that which is without myself; and the knowledge of each is equally accompanied by consciousness. Can, then, the knowledge of either, or of one more than the other, be consciousness? I think not. Certainly not without a confusion of terms. That consciousness is gener-

[1] Lect. xxix. p. 401.

ally regarded as giving a knowledge of the internal world I do not deny. This has come to pass because it is convenient, and because such knowledge is always present as a condition of consciousness. Nor will it be easy, or perhaps possible, to change the usage; but if we are to think or write clearly we cannot give to consciousness its own department of knowledge and also make it pervade all the other departments.

Is not consciousness then an inward witness or light? So some have said. So Cousin said; and he said it because it was so pervasive in its character. This, however, is figurative language, and is so far from precision as to need no farther notice here.

Once more, is not consciousness one of those original and primitive ideas of which we have spoken? Should it not be placed as such on the left hand side of our line? This has been said; but since consciousness accompanies our knowledge of those ideas in the same way as it accompanies our other knowledge, if consciousness were one of them we should need another consciousness back of that, and so on forever.

What then is consciousness? Is there any one power of the mind or mode of its activity that possesses the three characteristics already mentioned as belonging to consciousness. We think there is, and would define consciousness to be the knowledge by the mind of itself as the permanent and

indivisible subject of its own operations. This implies a knowledge of the operations, but leaves that knowledge to be given by its own specific faculty while consciousness holds the whole in unity by a constant reference of the different acts and states of the mind to the indivisible self or *ego*. According to this the formula of consciousness will be, not "I know that I know," but I know that it is *I* that know, and I know that it is the same I that knows, that also feels and wills. This knowledge of the self as the subject and centre of mental operations will have no reference to the validity or trustworthiness of those operations. We have our faculties. We know by perception; we know by memory. We know immediately, we know mediately; but if our faculty of knowledge, whatever it be, does not suffice to itself, it cannot be supplemented by consciousness. That has another field; it belongs to another sphere. Its office is to bind all the operations of the mind into unity. It does for the mind just what the cellular system does for the body. You will remember what I said about that. As I stated, the cellular membrane is found in connection with every part of the body. It enfolds, for instance, each fibre of the muscles. It is never by itself. It always accompanies something else, is for the sake of something else; and it gives unity to the body. And consciousness does the same thing for the mind. It is, as it were, its cellular membrane, combining

everything connected with it into unity; never found by itself, but always present in connection with every other mental operation. Hence, as I said, it is not a faculty. It is not under the control of the will. It is not anything that comes to us in any sense or degree through the operation of will. We have it from the beginning; we have it by necessity; and one man has it as much as another. Hence there cannot be different kinds of consciousness. If you choose to say self-consciousness, and give that a special field of knowledge, very well. You can then give attention to it or not, as you please, but consciousness, as just defined, is automatic and admits of no diversity.

What I have now called consciousness has always been known as one of the elements of what has been so called, but it needs to be separated; and, so far as I can judge, until that shall be done, and the term shall come to designate this, and this alone, it will be impossible to speak or write on this subject without confusion. Very possibly the discrimination I have made is not the right one. I could not accept what had been done, and have made it rather than sit down in despair. We must go on until we understand what this cardinal, universal operation of the mind is. In order to this we must separate it from everything else, and agree upon the elements to which we will give the name. So only can we make progress, and come out into a clear understanding of the questions which we discuss on these abstract subjects.

If what has now been said of consciousness be correct, it is plain that in adding it to our scheme, as we now do, we must write it as we did the cellular membrane, giving it the same relation to the mental faculties and their operations that the cellular membrane has to the bodily systems and their functions.

I have now stated continuously what I believe in regard to three of the great questions which have divided the philosophic world, and which still divide it. The first relates to the origin of knowledge; the second to the mode of our communication with the external world; and the third to consciousness. The discussions on the subject of consciousness are recent, and what I have said concerning that involves what has been said by others; but those on the other two subjects are ancient, and concerning them, especially the first, philosophers have been divided from the beginning. And that these discussions are not wholly speculative we shall see if we notice how the views I have presented on the first two points will either set aside, or solve the theories and questions, that have been proposed at different times.

In the first place the view *I* have taken of the origin of knowledge sets aside the question of which Cousin makes so much, about what he calls "the passage from knowledge to being." He

seems to regard that as the great question of philosophy. According to him we know without knowing being, and it is a great thing to make a safe passageway over from knowledge to being. But if we accept what has been said we set aside that question altogether because we do not know at all except as we know being. In knowing at all we know ourselves to be. In perception we know matter to be, and we know the subject as we know the attribute, one as much as the other. We know them in one concrete act, and so there is no such bridge needed as has been furnished us.

In the second place, our solution of the problem of the origin of knowledge is that we have knowledge of three kinds as is seen in the diagram, and that the mind is itself a source of ideas and of truths. On this point there have been two schools from the time of Plato and Aristotle, Plato believing that ideas existed before the several classes of objects, and that those objects became what they were by partaking of those ideas; and Aristotle, on the other hand, believing that all the furniture of mind came through the senses. These, at least, are the views commonly imputed to these two philosophers. Locke has been supposed by the continental philosophers to hold that all our knowledge originates in sensation, and that the furniture of the mind consists only of sensations and modified sensations. To this English writers generally have not agreed; and certainly Locke uses language

by which either view may be sustained. Possibly the question had not fully cleared itself up in his own mind. Liebnitz, on the other hand, was distinctly on the other side. Accordingly, when the formula was stated, supposed to be that of Locke, that "there is nothing in the understanding that was not previously in the sense," Liebnitz said, "except the understanding itself." There was the mind itself as a source of ideas in distinction from those it got from sensation. So in our time, the two schools continue; and we have had Hamilton on the one side and Mill on the other with their respective followers. It is remarkable that there should have been, and should continue to be, such a diversity of view on a point like this.

The interest in this question is not merely speculative. If it had been it would probably have died out long ago. It is mainly derived from the tendencies of the two schools. Connected with the origin of knowledge in sensation there has been a tendency to materialism, to sensualism, to a low standard of morality, and to the denial of a hereafter. Connected with what has been called the spiritual philosophy, or, sometimes, transcendentalism, there has been a tendency to idealism, to mysticism, to excursions into cloud-land, to forms of expression, oracular and obscure, and to an undue exaltation of reason. Men have assumed as the product of reason what was not; they have made out of ideas received in this way, or sup-

posed to be thus received, a kind of inspiration, and have become conceited and dogmatic. As everything known in this way is known infallibly, they cease to be concerned about being consistent with themselves. They say, "We know this; we see it to be so." Yes, but did you not see another thing the other day inconsistent with that. "We do not know whether we did or not. If we did, no matter; this is true." This is presumption. These are the two tendencies; but as we solve the question, you see how, by the tests applied, the mind is kept in a state of sobriety, and held down to the truth.

Now comes the second question. How does the mind communicate with the external world, and what does it know about it? And here it will be seen that I stand with Hamilton as a "natural realist," believing in the immediate knowledge — not as Hamilton says, consciousness — but in the immediate knowledge of both a *me* and a not-*me* of an ego and a non-ego. Hamilton believed in an immediate and simultaneous apprehension of two things — of himself and of the world. I agree to that, but I do not agree at all to his view about the senses, or about the relativity of knowledge. What is this doctrine of the relativity of knowledge? It is that what we know we know as it is related to our senses, and our faculties, and not as it is in itself. That this is true of much of our knowledge no one will doubt. It is because

of this that "there is no disputing about tastes." But, affirmed of knowledge universally, as he affirms it, it would land us in our not being sure that we know anything at all. Do I then know that the whole is equal to the sum of all its parts, or that a body must be in space, as something that is relative to my mode of apprehension? or do I know it as something which is so in itself, and which must be known to be so by all rational beings? I have no hesitation in saying the latter; nor in saying, further, that, whatever may be possible for others, it would not be possible for me to hold to the doctrine of the relativity of knowledge, without passing over into skepticism.

And not only does our mode of statement set aside the doctrine of the relativity of knowledge, but also that of materialism on the one hand, and of idealism on the other. Some have believed that there is nothing but matter. These are the materialists. Others, as Berkeley, have believed that there is no such thing as matter. These are the idealists. Seeking for a knowledge of matter through some one of the senses by a movement originating from without, and not finding it, and not having reached the distinction between the two movements from without and from within, and their results, they regard the whole process of knowledge, through the senses as illusory. The notices of the senses they regard, not as a set of signs to be interpreted with reference to something

back of them, but as wholly an illusion. These two views, especially that of idealism, have been extensively held.

But besides materialism and idealism, there are other forms of belief that are at once set aside by this doctrine of Natural Realism, or the immediate and simultaneous apprehension of both subject and object. Of these one is what is called the theory of Identity. This affirms that mind and matter, subject and object, are the same thing. Those holding this hold to a power of causation in matter similar to that of mind, whereas matter, whatever may be said of its dynamics, is not, in any proper sense, causative at all. It has no power of originating anything. It moves only as it is moved upon. This distinction, and this only, explains, as I suppose, the doctrine of second causes. A second cause is neither spontaneous, nor voluntary, but moves only as it is moved upon, whereas a first cause is self-moved. This, as I have said before, is a fundamental distinction between mind and matter, and while those who would break it down by a theory of identity may not be pantheists, yet their doctrine tends, and would logically lead to pantheism.

Then there is the doctrine of Nihilism, and I mention it that you may see to what extremes wise men — shall I say? — no, I will not say that, but men who call themselves philosophers — may run when they abandon their primary convictions and

reason logically from assumed premises. Rejecting Reason and its intuitions, and seeking in vain for substance through sensation, the Nihilists believe that there is neither mind nor matter. But this is absurd, since a man who denies his own existence has no right to affirm or deny anything.

But the theory regarding perception, that has created more discussion than any other, has respected, not so much its result, as its mode. The larger number of philosophers have believed in an external and substantial world as given by perception, but have supposed that the thing perceived was not the object itself, but something intermediate. Than this theory nothing can be more natural if we suppose perception to take place through any one or all of the five senses. We do see by means of an image, and hear by means of vibrations, and smell by means of odoriferous particles. The theory had its name, "Ideal theory," from the sense of sight, and drew its chief support from that. Reid was first led to examine, and then to attack it, as furnishing the chief ground to Berkeley of his denial of matter; and then to Hume of the denial of both matter and mind. Hamilton followed, and his refutation of this theory, in both its forms, is among the great services he rendered to philosophy.

On this subject there is a remarkable form of belief in our day — that of Mill and his followers. It is remarkable as combining Sensationalism with

Idealism. Mill is a sensationalist. According to him there is nothing in the mind that is not the direct product of sensation and experience, and yet he denies the existence of anything but phenomena, and even of anything but subjective phenomena. As illustrating what this form of belief is in itself, and in its results, perhaps I may be permitted to quote from a work of Mr. Taine[1] just published, and which I had not seen till I came to the city. Concerning matter or body he says: "Certain possibilities, and certain necessities of sensations — to these are reducible the powers, consequently the properties, consequently the very substance of bodies" (p. 280). Here he speaks of bodies, but what is body? "A power then is nothing intrinsic and personal to the object to which we attribute it. Consequently a collection of powers is nothing, consequently a body, that is to say a collection of powers, is nothing" (p. 279). But how do we come to know this body which is thus nothing? "No doubt," he says, "we know nothing of animate or inanimate beings except from the sensations they give us" (p. 296). And again: "A sensation, and notably a tactual or visual sensation, engenders by its presence alone an internal phantom which appears an external object" (p. 264). But how about the internal world? "Our successive events," he says, "are then successive components

[1] *On Intelligence.* By Henri Taine.

of ourselves. The ego is, in turn, each of these events. At one moment, as was clearly seen by Condillac, it is nothing more than the sensation of taste; at the second moment nothing more than suffering; at the third, nothing more than the recollection of the concert" (p. 205). Again he says: "The Ego is nothing more than the continuous web" — though how he gets a *web* I do not see — but "the continuous web of its successive events. If we consider it at a given moment, it is nothing more than a portion severed from its web, some salient sensation among others less salient, some preponderant image among others about to fade away" (p. 207). Again he says: "We have already seen that what constitutes a distinct being is a distinct series of facts and events" (p. 294). Now attend to what man is in full: "This man is 1st, the permanent possibility of tactual, visible, and other sensations which I experience in his neighborhood; and further, he is a distinct series of sensations, images, and volitions conjoined to the tendencies by which this series is accomplished" (p. 366). Now if you do not know what man is it is not my fault.

Finally, to show the tendency of this doctrine and the reach of this class of questions, he says: "We are disposed to conceive of it" (the Ego) "as a distinct thing, stable, and independent of its modes of being, and even capable of subsisting after the series from which it is derived has dis-

appeared." It is not fair to charge a man with holding what we may think the legitimate consequences of his doctrine if he disavows those consequences. I know nothing of Mr. Taine, or of others holding similar doctrines as regards their belief in immortality and accountability, but it is fair to state what we think does legitimately flow from such doctrines, and what would be the result of their general reception. And I have no doubt that if men suppose they are nothing, and that their minds are nothing but the successive states of sensation that they are in, they will suppose that when the organization ceases the mind ceases. They will find involved in the doctrine a virtual denial of any proper personality or accountability either here or hereafter; and, so far as mere speculative belief can prevail against the native instincts and tendencies of the mind, the doctrine will involve the destruction of the moral sense of the community.

We have now finished one part of our work. We have furnished the Intellect. We have seen what is in it, and how it got there. We have also shown how our mental operations are bound into unity by consciousness, and have explained the nature of that. We have attempted a separation of that knowledge by the mind of its own operations, which is a separate field of knowledge and

known by a separate faculty from that knowledge, by the mind of itself which is not by a faculty, but is native and necessary and common to all. In common discourse both these are included as given by consciousness, and without inconvenience, but for the purposes of philosophy a separation is needed, both in the thing, and in the name. That which gives the first has been called by Hamilton, and others, self-consciousness, but to avoid confusion we have called it the inner sense. That which gives the other I have ventured to call consciousness because that, and that only justifies the name by accompanying all other mental operations. It is a knowing of the mind by itself as the subject of its own operations at the same time that it knows those operations. How far it may be possible to change, or wise to attempt to change the usage in respect to language I do not know; but the time has come when it is essential to clear thinking that the things should be distin guished.

I refer, in closing, to the very brief and imperfect account I have given of the theories respecting the origin of knowledge, and the modes of perception. Those theories seemed to me to enter too largely into the history of human thought to be omitted entirely, and yet the limits of the course would not permit me to treat of them adequately. I can only hope that enough was said to show how the most abstruse speculations connect them-

selves with questions that are vital to society, and also to show how beautiful, and simple, and safe, nature and truth are, when compared with the speculations of man. True, the process of discovery has not always been from apprehended complexity to simplicity, but it was so in Astronomy; so it has been hitherto in mental science, and so, I believe, it will continue to be.

Here

LECTURE VI.

THE REPRESENTATIVE FACULTY. — CONTROL OF THE WILL OVER THE MENTAL CURRENT.

HAVING now answered the two questions, What is in the mind regarded as intellect? and, How did it get there? we are prepared to pass to the third question as originally stated. What operations can we perform with the materials thus in the mind? That the materials should be in the mind is clearly a condition for the performance of any operation with those materials.

But we must first inquire in what sense any thing is in the mind. It is not there as money is in your pocket, that is, if you have any there. That is something that you put there, and it abides, and you take out the same piece you put in. But is there anything in the mind? You learned the multiplication table once. Is it in your mind when you are not thinking about it? You know nothing about it. You can recreate it; you can say it when called upon, but it is a new thing.

But call it what you will, there is a power in the mind by which it reproduces states in which it has once been; or, more accurately, by which it returns to similar states while it knows itself

to be the same mind. Having then been once in a particular state of knowing, or feeling, or willing, the mind has the power of re-presenting, or re-producing those states. Hence we have

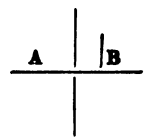
THE REPRESENTATIVE FACULTY.

Hamilton interposes a Conservative faculty by which that which is in the mind is preserved there, but we know nothing of the operation of such a faculty. He also speaks of a Reproductive, as distinguished from a Representative faculty. But that is not needed. What we know, and all that we know, is, that when the mind has once been in a state of knowing, or feeling, or willing, it may, on certain conditions, be caused to return to a similar state. The state and its product, if we distinguish the two, may be so similar that they shall seem identical, and the language used concerning them shows that they are supposed to be identical. What we need then is a faculty which shall bring back those states of mind which we have previously had, that knowledge which we have once acquired; and to do that is the office of the Representative Faculty.

Through this Representative Faculty, in connection with other agencies, when once the mind is set in motion, there is a constant succession of thoughts, of feelings, of volitions, passing on in a flow as constant as the flow of a river, and as independent of our wills. We can no more cease to

think than we can stop the planets from revolving. We may think about one thing and not about another, but think we must. In this respect the mind is like the body. You will remember that I pointed out the involuntary powers of the body. There are also involuntary powers of the mind analogous to them. The involuntary powers of the body furnish the material for the upbuilding of its voluntary systems and powers; they furnish the material. And so the involuntary powers of the mind furnish the material on which its voluntary powers act. They give the material, and form the condition of all those operations by which we recognize ourselves, and by which we have character.

And here we find that double aspect, or more properly, duality of our nature, by which a man is called upon to govern himself. This, if sufficiently understood, has not been sufficiently insisted upon and illustrated. It is a wonderful fact in our constitution, making a distinctive difference between man and the brutes. Possibly I can illustrate it.



Let us suppose the space on the left-hand side of the two upright lines to represent a vast unknown, and the space on the right-hand side to

represent the region of personality. Let the horizontal line A, represent those involuntary movements, the current I have spoken of, bringing with it thought, feeling, impulse, desire. All these move on. They come by no will of yours. A man provokes you, perhaps strikes you, how many impulses, feelings, thoughts, passions, this calls up! They come of themselves. You do not will them. You, represented by the shorter upright line B., stand above the stream at the point of its entrance and you watch them as they come in. The instant they come you see them, and one you approve and another you disapprove. Of the one you say, I accept it; and you cherish it. To the other you say Down! down! You will have nothing to do with it, and so you control yourself. Now do you not see that the stream which thus comes in and is moving on without any volition of yours is yourself; and that that which stands above and watches it is you? That is the difference between you and yourself; at least when we refer to the voluntary and involuntary movements of the mind. This involuntary current it is that is the source of dreams, of reveries, of fantasies, of insanity. When a man becomes insane, certain ideas, springing up involuntarily, become continuous and persistent, and overmaster him. He has no control over himself. The ideas become realities to him and govern him instead of his governing them. Often the struggle is long between

a man and these illusions; and doubtless many have been saved from insanity by a resolute will; but the moment he gives way he passes into one of the saddest and most humiliating conditions that belongs to our humanity. This is a mysterious part of our nature. There are phenomena connected with it that are not now, and probably never will be fully understood. This it is that brings in temptation. To this, in the form that is strongest at the moment, some men give themselves up, while others struggle during their whole lives against its suggestions and promptings. A most blessed thing it would be, would it not? if this part of our nature, which is indeed nature and nothing else, were never to present to us anything which we should need to reject; if we could always say to everything thus presented, Yes, yes. But it is not thus with any one of us. It was not always thus with the Apostle Paul even. He could say in view of that which thus presented itself, as well as of the infirmity of purpose in that to which it was presented, "Oh, wretched man that I am."

Now the inquiries that will occupy us to-night are mainly four.

First. What is it that determines the materials and order of this current when that is presented which has been before in the mind?

Second. What forms do the materials thus brought into the mind assume, either of themselves or under the direction of the will?

Third. What is there besides the laws of association and our own wills, that influences the whole mental current?

Fourth. What power has the will over the whole mental current — these materials, and this order?

First, then, of Representation. Do the materials that have once been in the mind come into it again fortuitously, or by some law? They often seem to come fortuitously. Nothing can be more capricious, or whimsical, or disconnected, than the odd fancies of our waking hours, to say nothing of our dreams. It is supposed, however, that under this seeming caprice there is always some law at work; and this leads us to consider the law, or rather laws of what has been called the

ASSOCIATION OF IDEAS.

And by ideas as here used is meant, not merely intellectual states, but also states of feeling and of will. In connection, then, with what ideas or principles are former mental states reproduced?

First, if two things are presented at the same time, and then, afterwards, one of those things presents itself, we shall be led to think of the other also.

Therefore we have

TIME,

as one of what have been called the associating principles. It matters not that the two ideas have

no other relation than that of time, they will introduce each other. If I see a flock of wild geese go over and there comes a storm immediately after, or if winter sets in, the next time I see the geese I shall think of the storm, or of the setting in of winter. It is in this way that what are called casual associations arise and become established in the minds of the community. It is in this way that signs, in distinction from causes, come to have the power over the minds of men that they have, and that various superstitions and quackeries arise. Two things are seen at the same time or in immediate succession, and afterwards come to be associated whether they have any connection in nature or not. Friday, you know, is considered an unlucky day. I do not know how it originated, but the association became established, and now there are many cultivated persons who will not, if they can avoid it, start on a journey on Friday. As communities become enlightened such associations give place to the inductions of science, but the number still remaining among us, based on this relation of time, is very great.

But the relation of time is not the only one on which casual associations are based. There is also that of place, and these two are generally combined. It is impossible for us to visit the place where an event of interest has occurred to us without thinking of that event, and it is because we thus associate events with places, that places have

a historic interest. But for this, Plymouth Rock, Rome, Jerusalem, would be but as other places. But while both these principles are natural and necessary, they furnish a soil into which superstition and folly so readily strike their roots that if we were to take from the history of the world their results as based on these two relations it would be quite another thing. We put down then as a second associating principle,

PLACE.

Again if we see a man to-day, and to-morrow see another who resembles him, we shall think of the man whom he resembles. Hence we put down

RESEMBLANCE

as a third principle of association. This is wider and more extensive than any other.

A fourth principle is that of

CONTRAST.

Heat reminds us of cold, poverty of riches, labor of rest, time of eternity, hope of despair This is the opposite of resemblance.

A fifth associating principle is that of

CAUSE AND EFFECT.

These are correlative terms, and so imply each other. The cause reminds us of the effect, the effect of the cause.

In the same way

MEANS AND END

are correlative terms. I place them here because they are generally placed among the associating principles, but it is doubtful whether they are not so subordinated to Cause and Effect that they ought to be identified with them.

These six principles of association, have been divided, and I think properly, into three classes: Time and Place, under which the mind works immediately and without reflection; Cause and Effect, under which everything is done by reflection; and Resemblance and Contrast which are intermediate.

These are the chief principles of association, and they seem to me to be original and irreducible; or at least that no reduction of them to any law more general can be made that will be of practical value. They will remain the separate working principles of the mind, and must be studied as such. Attempts at reduction have been made, and the result as given by Hamilton is what he calls the law of Redintegration; this is, that "thoughts tend to suggest each other that have previously been parts of one whole." That is the law which was given, as is said by Hamilton, by St. Augustine, and which he adopts. That it is *a* law I agree, but I do not think it *the* law, because I do not see that the law of resemblance can be brought

under it. That it cannot is shown by President Porter, who proposes as the law, "That the mind tends to act again more readily in a manner or form which is similar to any in which it had acted before, in any defined exertion of its energy." But taking this statement as it stands, I see in it no more reason why, if I pass the place where I met a friend yesterday I should think of him then and there than at any other time or place. If the tendency be there independent of circumstances, it would be as likely to show itself at one time as at another; but if it depends upon circumstances, we are thrown back at once upon the original law, having simply that and whatever tendency may be implied in our having a representative faculty at all. The faculty itself implies the tendency under certain conditions. That being given, what we need is to know the conditions. It is not, however, important whether we reduce these laws to one or not. The great, primitive, working ideas, are, as I have said, those which I have put down, and you will observe that most of them are taken from those ideas which were put down in the diagram as belonging to all men.

I have now mentioned the primary laws of association. There are also secondary laws which have much to do with the order of succession. These were especially mentioned by Brown, and you will find them dwelt upon at length in his lectures. They are chiefly these: 1st. Events that are recent, and objects recently seen are more

apt to recur to the mind. 2d. The greater the vivacity or emotion with which anything is received into the mind, the more likely it is to reappear. 3d. The longer it is dwelt upon, other things being equal. 4th. The more frequently it is brought before the mind. Hence the benefit of reviews. 5th. The state of our bodily powers will have an influence. 6th. Which will include some of the others, whatever will lead to more fixed and protracted attention. These secondary laws will vary with every individual; and hence we see from these, as well as from the varying combinations of the primary laws, how it happens that such a diversity of thoughts and courses of thought shall be struck out in conversation and in writing by different men.

But if thoughts come into the mind through some associating principle can that always be traced? Can you always tell how you come to think of a thing? Something comes into your mind. You say, "How did I come to think of that?" And you cannot tell. Concerning this philosophers have had two theories. One is that something comes into the mind and introduces something else, but disappears so instantaneously that all trace of it is lost. The other is that there is going on in the mind an operation which is below consciousness, but which still affects the involuntary current. This is Hamilton's view. I can only say that if it be correct it is an aban-

donment of the principle that the current is regulated by the laws of association, or by any laws that we can understand or control. I hold to the first supposition.

Of the representative faculty thus marshaling its hosts under the laws of association, the products appear in three forms; and to these as was proposed, we now pass.

The first and lowest of these is what is called Fantasy. Of this I have already spoken. There is in it simply a succession of images that have been before in the mind, with no intervention of will, or recognition of time or place. It takes place, as I have said, in reverie, in dreams, and in insanity. You have seen Niagara. It rises before you as a picture. You view it simply as such, and it passes and gives place to another. This is one form.

A second form is Memory. In this there is reproduction with recognition, and with the element of past time. These two distinguish memory from fantasy on the one hand, and imagination on the other. Memory is spontaneous, or voluntary. Spontaneous memory is the immediate suggestion, without the intervention of will, of our past knowledge when the occasion demands it. It may come by one principle of association or by another, but it comes unsought. Sometimes it seems as if the mind has the power to grasp what it needs by the mere suggestion of want. But however this

may be, in proportion as that which has before been in the mind is presented thus spontaneously, we are said to have a ready memory. The spontaneous and ready memory go together.

Then there is voluntary memory, or as it is also called, Recollection. We say, "I do not recollect, that is re-collect, or gather again. And that is done through the will. This power of re-collection differs according to the associating principles by which the mind has been accustomed to collect and arrange its knowledge. Are time and place the associating principles? They will determine the order in which the past shall come up; and, if there be a want of cultivation and judgment, the story that is told will have in it all the circumstances of time and place whether they are related to its point or not. It is by loosely connecting in this way, and uttering whatever the lighter associating principles may happen to bring up, that story-tellers become tedious, and talkers become endless. It is in this way also that men with this form of memory strongly developed have created the impression that great memory and sound judgment do not go together; they do go together, but men of sound judgment never display their memory in a way to show that they lack judgment. What is to be observed here, however, is, that if events, or knowledge of any kind, associated by time and place, do not come at once and of themselves, they can seldom be re-collected.

The will has little power over them; whereas, if the knowledge has been associated and arranged under the principles of Resemblance, and Cause and Effect, and Means and End, it can be re-collected more certainly. Time may be needed, but if it has once been thoroughly known and well arranged, it will come. Hence persons arranging their knowledge thus are said to have a retentive, but not a ready memory.

These are the kinds of memory so far as they depend upon the principles of association. Facts seem also to show that there are varieties of it, as a memory for names, that depend on special organization. But of that I cannot speak.

Now a word on the cultivation of the memory. This, with given power, will depend on three things. 1st. Attention — habits of fixed attention. Nothing can be remembered that is not attended to, and generally the memory will be in proportion, not to the attention we try to give to a subject in which we feel no interest, for that is often what is called study, but to the attention actually given from a genuine interest in the subject. Of this I have spoken before. 2d. A second condition for cultivating the memory is Order. This imposes upon every student who would remember well, the necessity not only of external order and arrangement, but of studying his subject till he sees its relations as whole and parts, and brings it into a system. It is generally

from not carrying studies out till this is done, and this is something which each must do for himself, that they are not remembered. 3d. A third condition is repetition. Of the effect of this in enabling us so to hold fast what we have acquired that we can command it at our will there can be no doubt.

But here a question arises. Will the memory ever lose anything? It is not whether some things may pass beyond the power of recall by the will, but whether anything can so pass away that no circumstance or event can recall it. It would be a marvelous thing if the throng and series of which I have spoken were to be retained — so marvelous that formerly I did not credit it at all; but there are well attested phenomena which render it highly probable. I have a written account by a young man who was suddenly brought into danger of immediate death, and whose whole life passed before him in the course of not more than two or three seconds in such a way as to convince him, who had been skeptical before, that there were in him the preparation for, and elements of, a day of judgment, and to lead him to become a religious man. Similar phenomena are related by those who have passed a certain stage in drowning and been recovered. Perhaps a distinction may be drawn here. A portion of what has been in the mind pertains to character, and a portion does not. All that does I believe will be retained, and perhaps what does not. I saw in yesterday's paper that a

machine had been invented by which, when one writes, there is made an invisible copy of every dot and mark so that it can be read by the microscope. We know too that there may be writing with invisible ink which only the fire will bring out, and I think there can hardly be a doubt, wonderful and fearful as it is, that all that pertains to character, at least, is so written that it can be made to reappear.

The materials that have ouce been in the mind reappear simply as pictures in Fantasy; in Memory we recognize them and place them in the past; but we are also capable of forming them into new combinations, and our power of doing this is called

THE IMAGINATION.

This is spoken of as Reproductive and Creative. But by Reproduction here nothing more can be meant than Fantasy, that is, the exact re-presentation of the pictures, or images, that have been before in the mind. As to creation, it seems to be agreed that the Imagination can, in strictness, create nothing. Its office is to rearrange and recombine materials given; but its work will be wholly different as it deals with the parts, or only the elements of the materials given. It is one thing for the poet to take parts of the different landscapes he has seen and combine them into a new one, more beautiful, it may be, than any of them; it is quite another for him to go back to the simple elements of form and color, and without reference to

the wholes or parts of landscapes seen, to create one. To do this is the higher power. The first is patch-work. *This* alone can be called creation. The same distinction holds with the dramatist and novelist. Their characters may be, and generally are, exaggerated or in some way modified specimens of persons they have seen; or they may be combinations by the mind from the original elements of our nature, perhaps true to that nature, perhaps not. So too in invention. The mind may avail itself of approximate combinations, and to this there is no objection; or, as in the case of Whitney's cotton gin, the end being given, it may frame an original and wholly new combination for its attainment. In these two ways imagination works, all material being plastic under its eye, if not under the power of which it can avail itself; and it is easy to see that its importance to human progress can hardly be over-estimated.

And not only with general progress is the imagination intimately connected, but also with individual happiness. I have known persons with imaginations strong and active, that seemed to minister chiefly to a suspicious tendency. Out of some look or casual expression of a friend, having no reference to them, they would frame theories that would make them wretched, and throw them off into lines of conduct indicating alienation, and for which nobody could account. Nothing can be more unhappy. Anything but a suspi-

cious temper combined with an active imagination, for the comfort of the person himself, or of those connected with him. On the other hand, the imagination may minister not only to the embellishment of life, but to its cheerfulness and hope.

But perhaps the greatest power of imagination over life comes from the creation by it of what are called ideals, not of art, but of character and conduct. Ideals are representations of that which is perfect, or which we esteem so. They are a setting before ourselves of lines of conduct such as belong to the higher and better parts of our nature. This all can do, and he who does not do it, and hold himself to them, is but drift-wood driven hither and thither by the circumstances in which he may be placed. The man who does it is a vessel that is bearing on to its port. He has an ideal, an end, a purpose. He is aiming at excellence. For a single person thus to form the ideal of a perfect life and to shape his course steadily with reference to it is a great thing. It is a greater thing, both for themselves and for society; it is what is now needed in opposition to the loose theories that are coming in, for two young persons who are united in marriage to form a perfect ideal of a double life, and so to hold themselves steady against the temptations of selfishness and of passion as to reach its complete realization.

We have now seen what the laws of association are, when what has once been in the mind is pre

sented again; and also what forms the materials assume, either of themselves, or under the direction of the will.

We next inquire, as was proposed, what there is besides the laws of association and our own wills, that influences the mental current.

And here it is to be said, that in addition to the laws of association, there is the constant operation of the presentative faculty in the form of sense perception presenting something new. This was intended to have, and must have with all, a great influence on the mental current. The succession of day and night, the order of the seasons, heat and cold, cloud and sunshine, new faces, new fashions, new scenes, affect all, but some much more than others. With some, the material and order of the current is determined chiefly from without. Unless excited by that which addresses the senses they are vacant and listless, while with others, the current is mainly determined from within. And then, if we add to the sights and sounds from nature, its tastes, and odors, and sensitive pleasures, and pains, what comes from conversation and from books, we shall see how greatly the mental current is modified from without. It is to be added, too, that as those around us can make suggestions for good or evil through the senses which we know to be from them, so I see nothing impossible or unphilosophical in supposing that there may be access to the mind by invisible beings who may originate

promptings and suggestions which we may not be able to distinguish from the products of our own mind. Who can tell? Many promptings and suggestions come to us, both waking and sleeping, in a way to indicate such an agency; but the fact of such agency philosophy can neither affirm nor deny.

It only remains to inquire what power the will has over the whole mental current, its material, and its order.

And first, the will has no direct power. It seems self-evident that we cannot bring a thought, and much more a feeling, into the mind, by willing to bring it there, because it is impossible to exert the will upon what is not in the mind already. Thought and feeling are the condition of will. But if we have no direct power, what indirect power have we? First, we can arrest any particular thing that appears in the current, and hold it, and dwell upon it, and thus change the whole current. And not only can we so arrest a particular thought as to change the current, but we can hold it with a firm grasp until we have examined it in all its parts if it be complex, and in all its relations to other thoughts and things. In the power to do this, men differ greatly; and he who can do it is capable of producing great mental results. It was in this power alone that Sir Isaac Newton said his genius consisted; and in studies like his we may be sure that without this no genius could have accomplished anything. It is in this indeed, that all

mental labor consists. If we would understand anything, all we can do is to hold the subject before the mind till we see it as it is. If we would originate or invent anything, all we can do is to hold steadily in the mind what we do know on the subject, in the hope that laws of association, not directly subject to the will, may present some new phase, or relation, or combination that will either be what we seek, or give us a clew to it. And to do this is mental labor; it is hard work; it is among the things men are most reluctant to do. Whoever can do this when he pleases, and especially if he has come to do it with pleasure, is said to have a well disciplined mind; and, as mental labor consists in this, so does mental dicipline consist in the capacity to do this at will.

But again the will has a wide control over those avenues by which the mental current is affected from without. What books we shall read is wholly within our own power; what companions we shall have, and what conversation we shall hear, is measurably so; instead of seeking, as many do, for scenes and objects and pictures which tend to defile the imagination and inflame the passions, we can avoid them. In a great degree the senses may be guarded, and, instead of becoming inlets and purveyors of vice, they may become ministers to purity, and to our sense of beauty in nature and in art. The senses and the imagination unguarded are the highway of temptation.

But our deepest and widest control over the mental current comes from the power we have of controlling the habits of association. We may dwell habitually on the dark side of things, and there are those who do that; we may dwell habitually on the bright side of things, and there are those who do that. Day by day there come up from the mysterious fountain opened within us thoughts, feelings, suggestions, impulses. We can repress one and cherish another. If not by a strong hand, then little by little, a little to-day and a little to-morrow, we can cherish certain lines of thought and of feeling till the whole current shall be changed. What is really done in such cases is the adoption by the will of some object of pursuit, some ruling passion, some supreme end, which shall become as the centre to a whirlpool in the current, and draw all things to itself. When the storm comes the philosopher thinks of his rain-gauge or his barometer, the merchant of his ships, and the farmer of his crops. It is a special point with dramatic writers and novelists to make their characters speak and act in accordance with such habits of association as their occupation or training would naturally originate, and it is a special source of pleasure to the reader when they do that. It is in this way that men become men of one idea. Let the ruling passion become strong, and, according to the idea they adopt, they will become successful and applauded, as falling in with the general sentiment; or notorious, as out-

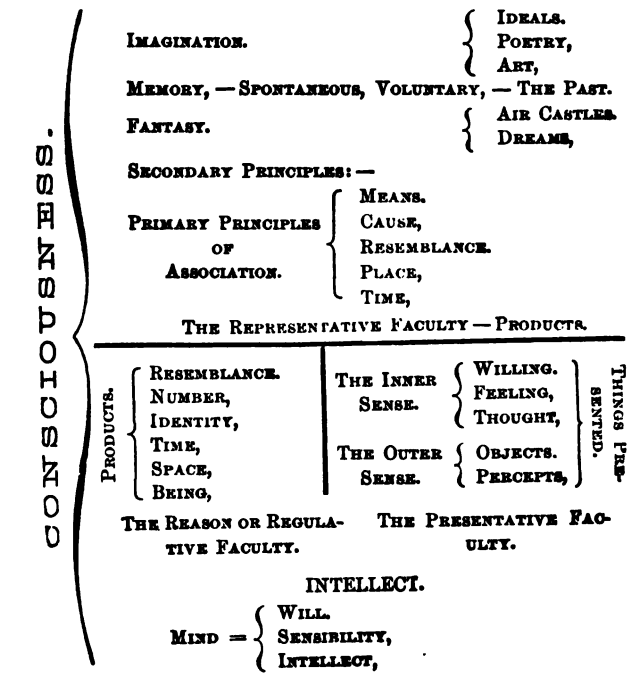
raging the moral sense of the community; or ridiculous, as riding a hobby; or heroic, as breasting the current, and sacrificing everything for principle.

There is one thing more. It is what I may call the reflex power. This is not understood, but is still a fact. Suppose, for instance, you wish to remember a name. You know it in a sense perfectly well, but it does not come to you. You make efforts of all sorts, and for a long time, and give it up; but some half hour afterwards, when you are thinking of something else, the name comes of itself in a moment. But for your effort, your concentrated attention, it would not have come; but by what hidden spring, or circle of influences, it is there, I do not understand: The physicists call it unconscious cerebration. It is in this way that many inventions are made, and that original thoughts come. Men labor and seem to labor in vain, but they are all the while becoming more and more acquainted with the subtler and more remote relations of the subjects, and at length the thing reveals itself as in a moment — perhaps a bright moment that rewards the labors of years.

On the whole, then, while there is doubtless a difference both in force and material in the involuntary current in different minds, and while external surroundings and influences will assert themselves in a measure, it yet appears that every man, not insane, has sufficient means of self-con-

trol. Let parents control children at the right point; let individuals begin at the right point with themselves, and avail themselves of the help which God offers, and they can control themselves with reference to all the ends for which He made them.

In the last Lecture we added nothing to our diagram, and found nothing to add except consciousness. In this we have found more, and with the additions now made the diagram will stand thus:



LECTURE VII.

THE ELABORATIVE FACULTY AND ITS PROCESSES. — CONCEPTS AND THEIR PROPERTIES.

We have seen that the mind, once awakened and furnished, moves on with an involuntary power. This movement the will cannot arrest in our waking hours, and we have no reason to suppose that it is ever arrested in sleep. With such a power only, a being in the form of man would be a *thing* — a necessitated, sensitive, spontaneously active thing. In this we have that in us which is properly nature, and we have seen the relation to this of that voluntary personal power that stands above it, that comprehends and controls it, and which is what we mean when we say "I." Through the agency of these two powers acting in accordance with the laws of association we have the Representative Faculty, giving us mere pictures, as in Fantasy, or recognized products, as in Memory, or modified products, as in Imagination. These, with the inflow of new material through the senses, all constantly modified by the rational intuitions, and brought into unity by consciousness, make up the mental current. Over this, as we have seen, we have means of efficient

control, by attending to some particular thing; by guarding the avenues of temptation, by a control of the habits of association, and by reflex power.

But besides the power of thus representing what it has received, the mind has the power of performing with the materials thus received other operations of an entirely different character. It can Compare, Abstract, Generalize, Judge, Reason, and Systematize, and in doing these it is said to bring into exercise what is called the

ELABORATIVE FACULTY.

It is by this faculty that those operations which are now called *thought* are performed. Formerly all the operations of the intellect were called thought, but more recently the term thought has been limited to the processes just mentioned.

The faculty is called Elaborative, and it will be observed that its processes hold the same relation to the materials brought into the mind that the processes of building and repairing hold to the materials which are brought into the body. The building and repairing systems take hold of that which is brought into the system and elaborate it; they transform it, and make of it another thing. The elaborative system does the same thing in the mind. It takes the material given by the presentative faculty and performs the operations I have mentioned, and those are the operations we are how to consider. These operations have, as I showed that the various functions of the body

have, a regular gradation. In order to abstract, it is necessary to compare; in order to generalize, it is necessary to compare and abstract; in order to judge, in the ordinary sense of that word, it is necessary to compare, abstract, and generalize; in order to reason, it is necessary to compare, abstract, generalize, and judge; and in order to systematize, it is necessary to compare, abstract, generalize, judge, and reason. There is here, precisely as in the body, a regular gradation and order of functions as conditioning and conditioned.

The processes here spoken of as belonging to the Elaborative Faculty are the same as those assigned to the Understanding by those who divide the Intellect into the Understanding and the Reason. As elaborating materials already given, and as subject to the will, these processes are in entire contrast to those assigned to the Reason. These we now proceed to consider separately. And first of

COMPARISON.

This some would not place first, but I do it because there is an elementary comparison and contrast of ourselves with other things in our first acts of thought, and that is involved in all our thinking. This is little noticed, but with what is commonly called comparison we are all familiar. Here are two men presented by the senses. One is tall, well proportioned, with a light complexion and sandy hair; the other is short, with rickety shoulders, a dark complexion and dark hair. In these and

other respects they differ, but there are others in which they agree. They have common senses; each has two hands and two feet; each has a chin; they both use language to express thought, and both have a moral nature. In comparing them or any two objects, we observe both the points of resemblance and those of difference, and, as we notice one or the other, we form habits of mind practically different.

There are men, who, in looking at different objects, habitually and chiefly observe the points of resemblance. These tend to classify and arrange all things, and bring them into unity. They are constructive and run into science, for there is no science except as there is resemblance, and as there are classification and arrangement based on that. Other men observe differences, and so become practical rather than scientific men. In dealing with different substances or different men we need to know, not so much what they have in common, as their specific characteristics and differences. Take the physician. There are physicians who are scientific; they know the general facts and laws of their profession, and can give a good lecture on any point pertaining to it. But take them to the bedside, and they fail from not discriminating differences. This is typhus fever, and that is typhus fever. The resemblances they see, but the difference between typhus fever and typhus fever they do not see, and so, in treating each case alike, they kill their patients scien-

tifically, or at least fail to cure them. These are the men of routine. There are others, who, while using the common name, observe every difference of age, of temperament, of habit, and who are thus able to adapt their treatment to each particular case. And so it is throughout. Scientific classification depends on the observation of resemblances, and practical skill on the observation of differences. So much for comparison — the observation of resemblances and differences. We next pass to

ABSTRACTION.

By this we mean simply the consideration of one of the qualities of an object without reference to the rest; as, for instance, the redness of this desk. You can consider that with no reference to the other qualities of the desk, and when you do that you abstract. This supposes a difference between substances and attributes. In abstraction we consider attributes by themselves. To do this is necessary in order to the next process mentioned, which is

GENERALIZATION.

We can abstract without generalizing, but we cannot generalize without abstracting. Between the two men already referred to, there are such points of resemblance that many assertions may be made that will be true of both of them; and that we may make such assertions conveniently, we need a common name. Generalization is the giving of

a common name to individuals and objects that resemble each other, on the ground of that resemblance. This implies that we abstract the points of resemblance, and consider them, without reference to the points of difference. To do this is natural, and is necessary to make language a convenient instrument for communicating thought. If we may call that a contrivance which is instinctive, we may say that there is no labor-saving contrivance like it. The single assertion, "Man is mortal," is equivalent to as many separate assertions as there are men on the earth. And so of other things. On the ground of their resemblance we are able to affirm of them all by a single assertion what is true of each. And this gives us indirectly a good rule for generalization. It is that we may apply a common name only on the ground of such resemblance that what we affirm of all shall be true of each. That this rule should always be observed is not possible, but the delusions and prejudices into which men fall from not observing it are endless. When it cannot be observed, and a common name is given on such a ground, for instance as nationality, we are to be careful to affirm of individuals only what is necessarily implied in the name, and not what we may have accidentally associated with it.

We now see how we get the general term, and what the use of it is. We next inquire what that is in the mind that corresponds to such a term.

When I speak of an individual man, I know what is in my mind. I know there is an actually existing being who corresponds to the name he may happen to have; but when I take the term "man," what is it in my mind that corresponds to that? Is there anything out of my mind, and existing in nature, that corresponds to it? No. What does the term, "man," mean then? The question here involved has long divided philosophers, and there have been three theories about it. The first is that of

REALISM.

According to this, when a general term is made use of, at least in some cases, there is something out of the mind that corresponds to it, a real thing. The term man, for instance, means not only what all men have in common, but something which exists apart from any individual man, and by partaking of which each individual becomes a man.

The second theory is that of

NOMINALISM.

According to this, there is not only nothing in nature that corresponds to the word "man," but there is nothing in the mind except the word, the name.

The third theory is that of

CONCEPTUALISM.

There are those who say that in apprehending

those points of resemblance on which the word is based, there is a mental product distinct from the word, which may be called a conception, or concept. This I suppose to be correct. But whether it be so or not, a concept is that which corresponds to a general term, and you see how it is reached.

Of concepts, as thus formed, the properties and uses are so many and so important, that they need to be well understood. And first, they have what are called comprehension and extension. What these are will be best explained by a series.

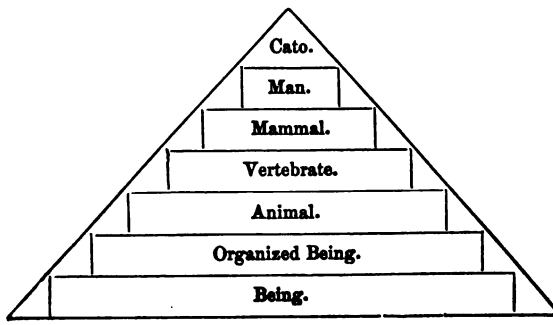
BEING.
ORGANIZED BEING.
ANIMAL.
VERTEBRATE.
MAMMAL.
MAN.
CATO.

In this series, there are two wholes which are inversely as each other. Taking the individual, Cato, you will see that he has in him a greater number of qualities than man has. He has all the qualities needed to make him a man, and in addition, those specific qualities which make him Cato. Man, again, has more qualities than Mammal. He has all that belongs to Mammal, with those needed to make him man. And so on, all the way up, till we reach Being, which is said to be the most general of all, but has no attribute except itself. Here then we have, in an individual man, a greater number of qualities, and so greater

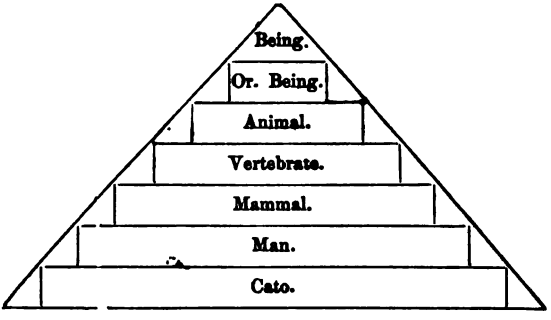
comprehension, than in any member of the series above him; and the qualities go on diminishing till we reach the top. In the individual, at the bottom, the number is the greatest possible; in Being, at the top, the number is the smallest possible. We thus see what a whole of comprehension is, and how one is greater than another.

Beginning now at the top, we shall see that Being can be affirmed of more objects than organized being; that organized being includes under it more objects than Animal; Animal more than Vertebrate, and so on till we come to Cato, where we have the least number possible. This gives us extension, and it will be seen at once that the whole of extension can become less, only as the whole of comprehension becomes greater,

In our first Lecture we had a pyramid in which the steps of the creation were represented, the numbers diminishing as qualities were added till we reached man. We may also have here a pyr-



amid representing the progress of thought as it passes from the more to the less general. Thus, this pyramid shows us a whole of extension, and how it diminishes till it reaches a point in Cato. A similar pyramid with its members inverted will give us a whole of comprehension diminishing till it reaches a point in Being. Thus



These two pyramids will enable you to understand easily the two wholes that are contained in the concept, and how it is that they must be inversely as each other. A clear understanding of this is the key to most of the processes of thought and of Logic.

But before showing how this is, let me ask your attention to the peculiarities of the lowest, and of the highest members of the series above given. And first of Cato. This is the name of an individual, and, according to the definition that has been given, cannot be a concept, since a concept

is formed by a comparison of different individuals. What right, then, has it to be among concepts? It would have no right there if it were not itself a concept. This it is, but differently formed from those already considered. Etymologically a concept is a gathering together. As heretofore considered, it is a gathering together of individuals under a common name on the ground of a common attribute or attributes. Here it is a gathering together of attributes in an individual or object, and so it is, as I explained in the fourth lecture, an individual concept, in distinction from a general concept that is formed by generalization. It is the concept of qualities, as that is of objects; of comprehension, as that is of extension. In the books generally it is called a percept, but a percept is the product of a single sense. This gives harmony to the whole procedure. It places at the foot of the column, and as the condition of generalization, an individual person or object whose distinguishing and common qualities must have been found by observation, so that observation must be the basis of any generalization that can avail anything,

So much for the lowest term of the series. Now for the highest, that is, Being. This is commonly, and I believe universally regarded by logicians as the result of generalization, and as giving us the *summum genus*, or most comprehensive class. But is this so? It is conceded that the idea of Being

is given us by intuition at the very beginning of our mental operations. Is the idea of it here different from that we had when we began? Do we get something new, or do we complete the circle, excluding everything except Being, with which we began? I think the latter. We had with us the idea of being when we began with Cato, and it simply remains as applicable to all things when everything else is excluded. It is not, like the others, an attribute known by observation to belong to an individual or to a class. We know by observation the attributes that belong to Cato, and man, and mammals; but it is not so with Being. That is a necessary idea accompanying the whole process, and is at length left alone as the one thing that must be thought in connection with every particular being and thing. In this view of it, Being is not a concept at all, either individual or general.

Knowing thus how our column is composed, we shall readily understand those two great operations in thinking, definition and division. Who ever can define and divide accurately will have power as a thinker. A logical definition always consists of the genus, that is, of the class above, and the specific difference. Thus, Cato is a man, with the specific differences that make him Cato. A man is a mammal, with the specific differences that make him man. A mammal is an animal, with the specific differences that make it a mam-

mal, and so on till we come to Being which cannot be defined, because, as is commonly said, there is no higher genus above it. And technically, this is the reason, but the real reason I suppose to be that Being is a simple idea, and simple ideas being known immediately, can only be recognized, but not defined.

In division we begin at the top and reverse the process by which we went up in definition. Being cannot be divided, but as indicating a group it may be regarded as a concept, and the things that have being may be. Of these, therefore, we make a division into Substance as either spiritual or material; then of Material Substance into organized and unorgarized; then of organized matter into animals and plants; then of animals into their great classes, and so on, constantly diminishing numbers and adding qualities, till we reach Cato who has the greatest possible number of qualities, but who cannot be divided and remain Cato, or a man. Remaining a man, the individual is incapable of a logical division.

And now, in connection with the two processes just given, we may see what it is to think clearly, and what to think distinctly, and the difference between these.

We think clearly when we discriminate a given concept, as man, from all others. This it is often not easy to do. To this day men are not agreed as to the differences between man and animals;

but whoever shall be able to include in the term man all that is so distinctive of him as to constitute him a man, and nothing else, will think clearly respecting man. This clearness is said to be obtained by definition, but it seems rather to be true that we get at the definition through that clearness which we gain by investigation.

By distinctness, on the other hand, we mean a knowledge of all the divisions, and parts, and qualities, contained within a given concept. We may separate man clearly from other beings, and yet not have a distinct knowledge of him as he is divided into different races, or as he is made up of those different systems which we are now studying. And distinct thinking will respect not merely the general, but also the individual concept. We think distinctly of an individual only when we have an exact knowledge of those traits by which he is distinguished from all others.

This distinctness of thinking we reach by division, or rather, again, by distinct thinking we are able to make divisions that are exhaustive. This is even more difficult than clear thinking. It is a great thing to be able to think clearly and distinctly on any subject, and no man can do it on many. It is a great thing, and what few men attain to, to be able to handle adequately general terms. Take, for instance, such a word as civilization, and who can fix precisely its elements and limits? Take such a word as virtue. To the child and untrained

man it presents a mere blur, and who is there that thinks with entire clearness and distinctness when it is used? And so it comes to pass that there is a great deal of speech in which such terms are used, which conveys but a very indistinct impression to those who hear it. And so too we may see how it is, as Campbell says in his "Philosophy of Rhetoric," that men may speak and write nonsense without knowing it. The words are familiar, they are correctly arranged, they have connected with them, it may be, pleasing and stimulating associations, but when you come to analyze them they mean nothing at all. I remember inquiring of an author who sent me his work for criticism, what a particular passage meant. He replied that he thought it meant something when he wrote it, but was satisfied it did not. Of this there is not a little, especially in writing supposed to be "deep."

The two wholes in the column presented, related as they are inversely to each other, have given rise to no little difficulty among philosophers in regard to the processes of analysis and synthesis. Some philosophers have called it an analysis to begin at the bottom and throw off properties, and a synthesis to begin at the same place and add objects, while others have called it an analysis to begin at the top and throw off objects, and a synthesis to add properties, and so, dealing with the same elements, they have been at cross purposes and have seemed to contradict each other. Both were right

but they began with different wholes, and did not think clearly.

We have now found all the substantive materials which the mind forms and with which it works except one. We speak of the individual, of man, and of humanity. Humanity is what is called an abstract term. In forming it we abstract what belongs to man universally, and then, having condensed it into a word, we deal with it as if it were a separate thing. It is not a separate thing. It has no real existence, but it is convenient for us to regard it thus, and to make use, in this way, of abstract terms.

We have, then, as the substantive product of our mental action up to this point, and as the materials for our future work: First. The primitive necessary ideas of Reason. Second. Percepts. Third. Individual or comprehensive concepts. Fourth. General concepts. Fifth. Abstract terms. These are the materials with which we are constantly dealing, and these are all. Of these, each is differently formed. Each has its own laws and is subject to its own processes; and it will be an era in mental science when these shall be clearly discriminated, and there shall be no attempt to employ the processes which belong only to one in dealing with the others.

No one can know the past without seeing that much labor has been spent in manipulating the general concept which could have no possible bene-

fit till more had been given to the investigation of individual objects, and so to the enriching of individual concepts. The general is dependent upon the individual concept for its whole value, and men might as well be employed in blowing soap-bubbles as in ringing changes upon general terms, quite as empty, except as they are freighted with meaning from individual concepts. It has been a serious mistake to suppose that labor in one of these departments could be a substitute for it in the other.

I cannot help thinking also that there has been, and is, a want of discrimination between the necessary ideas of Reason given us at first on the left side of the line on our diagram, and those found by generalization. These are wholly different in their origin and characteristics, and should be named and treated differently. In the one we have a complex product given by observation, the comparison of different objects by abstraction and generalization. There is about these ideas no necessity either of the ideas themselves, or in the processes by which they are formed. In the other the product is simple, it comes without any process of abstraction or generalization. It is not the product of any process of thinking, but its condition; and not only are the ideas themselves necessary, but all processes and movements of the mind, so far as these are elements in them, are necessary also. Looking then at the process by which, as we have seen, con

cepts are formed, I ask you by what process that shall conduce to clearness of thought and of expression we can make concepts of these ideas and thus bring them under the same class with those formed by generalization. And yet this is constantly done, and by our most eminent writers. And not only so, but the processes, as of induction, that have properly for their material only the products of observation and generalization, are nominally transferred to these ideas as if they were the same. I venture to question whether these ideas can ever become what may properly be called concepts, or can be the material for any process that can properly be called induction. In these studies nothing can be more confusing than the transference of the same name to things and processes that are radically, or essentially different.

But however this may be, we have now those mental products which are to be employed as elements and materials in the remaining elaborative processes, as those processes are generally understood. Involving, as they must, the ideas of Reason, Judgment and Reasoning are supposed to have for their material, and to deal directly with the percept, the individual concept, the general concept, and with abstract terms. We proceed then to the next of the elaborative processes mentioned.

THE JUDGMENT.

In one view of it, Judgment is elementary. I do not well see how we can think without judging. And that is the doctrine of the philosophers generally. They say that a judgment is involved in all our thinking. But as it is used in logic, and used generally, the term does not go back in that way. As thus used, it is subsequent to a comparison either of objects or concepts, and consists in an affirmation that they agree or disagree. Iron is a metal; we know what iron is, and we know what metal is, and we affirm that they agree; or that one of these comes under the other. That is a judgment. A judgment is necessarily expressed in a proposition; and this will be either affirmative or negative. The proposition again must contain either expressly or impliedly two terms, indicating the notions compared, and a copula, which will always be some form of the verb to be. This is true of judgment in general. Of its different forms, as Categorical, Hypothetical, and Disjunctive, it is not necessary to speak.

For judgment, as we have now considered it, the previous Elaborative processes were a condition; and Judgment, together with those processes, is a condition for the next of those processes, that is,—

REASONING.

By Reasoning we gain mediate knowledge. In

intuition we have immediate knowledge, but in reasoning we get a knowledge of one thing by means of other things. The process of the mind in this is said to be discursive instead of intuitive. Its object is to show that a proposition that is not self-evident is either true or false. Ability to do this indicates mental power, but the need of doing it is from a limitation of power. A mind with power enough to see all things directly and intuitively would not reason. And not only do we reason when we prove, or disprove propositions, but also when we assign causes, or give reasons, or explain anything. Here is a rainbow. You wish to know how it came, and you discover the laws of light, and its operations in connection with the rain drops, so that you are able to give the reason or cause of its being there; and that is Reasoning. It is a passage from a thing to its cause by means of other things, in the same way as we pass from one truth to another by means of one or more intermediate propositions.

Of Reasoning there are several forms, and, in my judgment, more than one process. Whately insists strenuously that there is but one. He says: "In every instance in which we reason in the strict sense of the word . . . a certain process takes place in the mind which is one and the same in all cases, provided it be rightly conducted." But of that we can judge better after considering the

different forms which reasoning assumes. And first of

INDUCTION.

In this we establish general facts, or laws, or truths, from particular instances. We begin with the individual, we compare individual with individual, and go on till we feel authorized to affirm a general truth.

This assumes two forms. There is first what is called, by the logicians, Formal Induction, in which the conclusion is drawn, or is said to be, from an enumeration of each case. This is all the Induction that Sir William Hamilton allows of in logic, because he allows of nothing as belonging to logic, unless the conclusion is necessitated by the laws of thought. But it may be questioned whether induction by simple enumeration is reasoning at all. Suppose I enumerate the sixteen wards of Boston, and affirm of each that it has a steam-fire engine, and then say, *therefore* every ward of Boston has a steam-fire engine, would that be reasoning or would it be an assertion of the same thing in a different form? I think the latter. But however that may be, this is not what people generally understand by Induction. They understand by it the bringing in of numerous individual instances by observation, and then concluding from them over to a general truth. The observation is preparatory to the induction, but no part of it. That

consists in so reasoning from observed instances to those not observed as to constitute a class, or to find a general law.

In any particular instance of induction, the inquiry is whether we are authorized to extend, in that instance, uniformity of causation, of construction, of succession, of appearance even as in color, from the instances which we have observed to others not observed in such a way as to make of them one class, as to affirm of them the same general truths, and to make of those general truths premises for deductive reasoning. All the ground we can have for this is Analogy, or a likeness in some respects between the phenomena. That likeness in some respects leads us to infer likeness in others is a fact, and a fundamental fact in the reasonings of life. It is the basis of probable reasoning. "It is not my design," says Bishop Butler, "to inquire farther into the nature, the foundation, and measure of probability; or whence it proceeds that *likeness* should beget that presumption, opinion, and full conviction, which the human mind is formed to receive from it, and which it does necessarily produce in every one." So when Franklin had observed certain similarities between terrestrial electricity and lightning, he suspected they might be the same; but in inquiring whether he had a right to put them in the same class, the question was not about the uniformity of nature in general, and in other departments, but whether the ob-

served similarities were sufficient to justify him in inferring that they were altogether similar, or at least so far as to be attributable to the same cause.

But while likeness alone raises this expectation, other things may come in. Seeing an animal with horns, that was also cloven-footed, some slight expectation might be raised that the next kind of animal with horns would also be cloven-footed; but as no reason of congruity or utility can be assigned for this, it would require many instances to justify us in saying, as we now do, that all horned animals are cloven-footed. But, observing one kind of animal, as the sheep, destitute of upper cutting teeth and also chewing the cud; we should much more readily affirm the chewing of the cud of all other animals destitute of upper cutting teeth because there is an evident congruity and utility in it. While, therefore, likeness in certain respects is indispensable as the ground of any Induction; yet other things come in to determine the degree of likeness or the number of instances required, and of these no exact statement can be made.

It would appear, therefore, that an act of Induction may respect causes, as of the movements of the heavenly bodies; or structures, as of horned animals that are also cloven-footed; or successions, as of the seasons; or mere color, as when we infer that all crows are black. In each case we inquire, not, as is commonly said, whether we may infer from a part to the whole, which would be a begging

of the question, but whether we may regard as a whole, that is, put into one class, beings and phenomena which had been regarded as separate. With phenomena thus different, and with resemblances of every shade, we might expect that the human mind would find here, instead of a logical treadmill, constant calls for all its natural and acquired sagacity.

Such being the process of Induction, it remains to inquire for its underlying axiom. There is none except the uniformity of causation. By this we mean that the same causes operating under the same circumstances, will produce the same effects. Instead of this, modern science assumes as the axiom of Induction that "Nature is uniform.' And here we see the source of much of the false logic of science. It assumes, wholly without proof, and against it, that nature and its laws are uniform and independent. This is the one postulate of mere scientists on which their whole structure rests. But so far is the general proposition that nature is uniform from being at the basis of our Induction that it is itself the result of Induction.

There is doubtless in man, as in animals, an instinctive adjustment of his nature to his surroundings as uniform. But this is not Induction, nor its basis. As intelligent and scientific, man has reached particular uniformities, as of the seasons, of tides, of comets, only after such induction as each case seemed to demand. This he has done,

not on the ground of uniformity of nature, for the question in each particular case was whether nature would be uniform in that case, but solely on the ground of the uniformity of causation. That nature is uniform in her different departments and throughout her domain is by no means an instinctive belief It was long before the laws that prevail on the earth were supposed to extend to the heavens; and it was a surprise to find that the sun and fixed stars are composed of the same materials as our earth. If it were an axiom that "nature is uniform," then nature could not be broken up without falsifying a fundamental law of belief. But if we assume that the only axiom applicable in Induction is uniformity of causation, the other uniformities following from that, two things will follow.

One is that we cannot put Induction into a syllogism. The fact that causes will continue in the future to operate as they do now, or that they will continue to operate at all, is not contained in the fact that they are operating now, in the same way that the conclusion of a syllogism is contained in the premises. It is not contained in it at all. One assertion is not a general truth under which the other comes, and no ingenuity can make it so. The conclusion, therefore, or inference, can be only probable. No axiomatic major premiss can give to it one particle of its own evidence, and nothing can be gained by any attempt to make it do that.

The second thing that will follow is that the

order of nature may be changed or broken up without interfering with any law of thought or of human belief. That this may be, the whole history of belief shows. We do indeed naturally expect that causes now operating will continue to operate; that structures similar to those now growing up will continue to grow, that events occurring regularly now will continue to occur; but if this were not to be so it would contradict no law of thought; it would be opposed to no fundamental axiom. We have but to suppose that back of all bases of Induction, back of uniformities and laws of nature, there is a *Personal Cause*, and all difficulty about miracles, or about any such future catastrophe as the Bible reveals, is removed at once.

Induction presupposes a ground of uniformity which presents itself to us as impersonal. This ground may indeed be maintained, and so, overruled and suspended, by a personal being; but as a ground of induction the personal element is not recognized. Hence the moment we begin to reason about final causes, or ends, and nature regarded as the work of a personal being, we pass from the region of nature to that of personality, and the question whether we have a right thus to pass cannot be decided by Induction. We reason respecting the conduct of personal beings, on the ground that they will be consistent with themselves; and we reason respecting the processes and

laws of nature, on the ground that they will be consistent with themselves; but it is only the last that we call Induction. The first has no distinctive name, probably because it cannot become a science. The underlying principles are not the same, and we should be careful not to confound them as has too often been done.

LECTURE VIII.

REASONING. — ANALOGY AND EXPERIENCE. — DEMONSTRATION AND PROBABLE REASONING. — INFERRING AND PROVING. — SYSTEMIZATION.

THE Elaborative Faculty takes the crude materials furnished by the Presentative Faculty and modifies them. The operations it performs in doing this, are Comparison, Abstraction, Generalization, Judgment, Reasoning, and Systemization. These processes were shown to follow the law of the conditioning and the conditioned, and to be analogous to those by which food is elaborated for the body. These we have considered as far up as to Reasoning, and spoke particularly of Induction.

For Induction we found the sole field to be the phenomena furnished by observation; we found that a conclusion respecting these, whether in their succession or construction, could gain nothing from any syllogistic arrangement of terms, and that the only law of belief on which any conclusion can rest back is that of the uniformity of causation. If it can be shown in regard to anything that the same causes will continue to oper-

ate under the same circumstances we may be sure of uniformity. If not, nothing reached by Induction that we may call a law has any claim to be regarded either as absolutely uniform or as permanent. No law of belief would be violated if it were to be interrupted or broken up at any time. The mouse remains in his underground nest for three months, and "all things continue as they were," but the fourth month the plowman comes, and he must seek a new nest. The question of an interruption is one of evidence like any other, and can be decided only by a knowledge of all the causes that may come in.

After Induction, Deduction is usually spoken of. Indeed, Deduction is often considered first, and there are reasons for that; but as Induction is supposed by some to be always, and is many times, the condition of Deduction, it comes first here. Then comes, not Deduction, but, as based on the same ground as Induction, reasoning from

ANALOGY AND EXPERIENCE.

This, as well as Induction, is what the logicians call modified logic. It can never give certainty.

In Analogy we reason from individual to individual on the ground of observed similarity in certain points. From similarity in points which we are able to observe, we infer similarity in others which we either cannot, or do not, observe. In Induction we reason from several individuals and

form a class, or infer a law; in Analogy we reason from one or more individuals to an individual, and infer resemblance in unobserved qualities or particulars. You have seen a man with red hair, and he was passionate. You see another man with red hair, and infer that he is passionate. A miner finds a mine in connection with certain formations or appearances of the earth above it. Finding those appearances again, he reasons from Analogy and expects to find another mine. The case commonly put is that of reasoning from the earth to the moon. We observe several similarities between the two, and then if we think they will authorize it, we conclude that the moon is inhabited. Or, we observe the differences, and infer that the moon is not inhabited. Here we have the same underlying ground as in Induction. It is likeness, giving, as Bishop Butler says, probability — that and nothing more. Hence, though it is a constant ground of inference in life, and a constant means of advancing knowledge, some will not admit it as belonging to logic.

But I spoke of Experience as well as Analogy. Experience is supposed to be a certain, and Analogy an uncertain, ground of inference. How do they differ? We have strict experience only of what has been, and now is. These we may know certainly by experience, and these only. We say we know by experience that fire will burn. Not strictly. We know by experience that fire has

burned; we infer from experience that it will burn; but in strict experience the certainty of the past so passes over into the future that we say we know both. We reason from Experience, as from Analogy, in regard to objects that coexist in space, and events that succeed each other in time; and we reason from strict experience only on the supposition that the objects and causative agencies continue to be either the same or precisely similar in that point, or in those points on which the argument turns. We then feel the same certainty of our conclusion that we do in the continuance of the laws of nature; but if there be any departure from identity or exact similarity in the circumstances, the certainty will be proportionately diminished. Our reasoning will be from Analogy, and not from Experience.

We have thus the exact difference between Experience and Analogy so far as Analogy is a ground of argument. All analogy implies resemblance, but resemblance may be either between things or their relations. It is only a resemblance between things that can be a basis of argument; a resemblance between relations is the basis of figures of speech. There is no resemblance between the foot of a man and the foot of a mountain or between the head of a man and the head of a nail, or of a river, or of a government, therefore we cannot reason from one to the other, but there is a resemblance of relations, and so there is a foundation for a figure

of speech. There is no resemblance between light and truth, but truth is to the intellect what light is to the eye, and from this resemblance of relations they are said to be analogous to each other. It is true that resemblance in relations generally implies some resemblance in things, but we are to be careful not to confound these two grounds of Analogy, and so mistake for Reasoning, mere figures of speech.

But if the account now given of the difference between Analogy and Experience be correct we shall see that the cases are relatively few in which we reason from strict experience, and that, in most cases in which we are said to do that, we reason from analogy. This is well illustrated by Dugald Stewart. Men are said to be governed by experience in politics or statesmanship, but no two cases exactly alike ever occur, and, for the most part, in this department what is called experience is not only analogy, but a remote or loose analogy. The same is true, and perhaps more signally, in medicine. Without undervaluing what is called experience in that, for by it great sagacity is acquired, it may be said that cases seldom occur in which it is possible to be guided by a strict experience. The same name is prescribed for, but from difference of age, constitution, habits, no two cases are wholly alike, and diseases properly bearing the same name may require, with different persons, at different periods, in different localities, differ-

ent and even opposite treatment; while a routine practitioner, claiming that he is governed by experience, will take the easy, perhaps reputable, but perhaps also fatal course of treating them all alike. This uniformity of names and diversity of things explains the number of infallible remedies that are advertised, all claiming the sanction of experience. No doubt all have proved beneficial in certain cases, and would in others if they were exactly like them. There is the difficulty. There is uniformity of causation, but such a variety of cases that it is impossible to apply the principle. Let any one have the rheumatism and he will be surprised at the number of those who will propose remedies that they know by experience will cure it. What they really know is that they took the remedy and got well, possibly in spite of it.

In theory an exact line can be drawn between Analogy and Experience, in practice it seldom can. The usage of language would make it to be Experience when we reason from one individual of a species to another of the same species, and Analogy when we reason from one species to another. But we can reason more safely from species to species on some points than from individual to individual on others. However alike two men may seem, we cannot be sure that the same remedy that will cure one will cure the other. As different as an alligator is from a man we might

be sure it would kill him to cut off his head. The essential thing whether in Analogy or Experience, is to make sure of the similarity or identity of that on which the reasoning turns. There may be great diversity in other respects, but if that be the same we may conclude safely.

These processes of Induction, Analogy, and Experience I have dwelt on because they belong to the regulation of our daily life. We are all, young and old, unlearned and learned, constantly carrying them on, and it is well for us to understand the ground on which they proceed.

We now pass to

DEDUCTION.

This is commonly said to be opposed to Induction, that beginning with particulars and reaching general truths; this beginning with general truths and deducing particulars from them. So far as it does this, Deduction is a process that assumes, or may assume, the form of the syllogism, thus —

All explosive substances are dangerous.

Nitroglycerine is an explosive substance.

Therefore nitroglycerine is dangerous.

This is a form of reasoning the importance of which has, at times, been strangely exaggerated. At times, also, it has been undervalued. Even yet, while a man so eminent as Archbishop Whately says that all forms of Reasoning may be brought under it, John Stuart Mill says it is not a

form of reasoning at all. What then are we to do? Perhaps we cannot do better than first to explain what the process is, and then inquire respecting its nature and value.

Referring to the example given, it will be seen that we first affirm something of a class of substances; that we then affirm of a particular substance that it comes under that class, and then conclude that what belongs to the whole class belongs also to the particular substance affirmed to come under it. Putting this in its most general form we have the dictum of Aristotle, which is that "Whatever may be affirmed or denied of a class, may be affirmed or denied of whatever comes under that class." Here the conclusion is made to depend on the class relation. Sir William Hamilton makes it depend on the relation of whole and part. His general maxim is that 'What is part of a part is part of the whole." This is more comprehensive than the other, but the principle is the same. In both the proof is wholly from the fact that one thing is included in another as a smaller circle is included in a larger.

But to trace the process more particularly. We wish to prove to an unbeliever that nitroglycerine is dangerous. We have here two terms that indicate, the one a substance, the other an attribute, and we wish to know whether we may affirm of that attribute that it belongs to that substance. We cannot bring them together directly. We

therefore find a third or middle term that indicates a class of substances of which we both agree that the attribute, dangerous, can be affirmed. If now we can show that nitroglycerine comes under that class our point is gained. This we do, as in the example, by a set of comparisons. We first compare, in the major proposition, the major term, dangerous, with the middle term, explosive substances, and find that they agree. We then compare also the minor term, nitroglycerine, with the same middle term, and find that they agree; and we then infer that the major term, dangerous, agrees with the minor term, nitroglycerine, on the principle that things which agree with the same thing agree with each other. Here you will see that I bring in another principle wider than that of class relations, or of whole and part, that of agreement, and this Whately and the logicians generally bring in without distinguishing it from those principles, or from those of identity and equality. Everywhere Whately asserts that all Reasoning can be brought under the dictum, and yet he lays down as the axioms of pure categorical syllogisms, first, "If two terms agree with one and the same third they agree with each other;" second, "If one term agrees, and another disagrees with one and the same third, these two disagree with each other," evidently supposing that these axioms are identical with the dictum. But they are not. They are broader, and apply to cases to

which neither the dictum nor the axiom of Hamilton will apply. The principle itself is different, and that such a man as Whately did not see this, setting aside as it does his theory of the syllogism as inclusive of all reasoning, shows the relative difficulty and importance of a careful discrimination of the elements with which we deal as compared with a ready command of logical forms. The dictum under which he would bring all Reasoning does not even apply to all Deductive Reasoning. If I say that A equals B, B equals C, therefore C equals A, there is conclusive reasoning under the relation of equality which may perhaps come under that of agreement, but there is no class relation, and no whole and part. It will be found, and indeed enters into its very form, that the dictum, and so the syllogism, is not applicable except when a general concept forms a part of the major premiss. The regular syllogism begins with that; it makes a general affirmation from which some particular truth is deduced, and to make such deduction is its province. Syllogistic logic teaches the proper use of general terms when they are employed in reasoning; that, and nothing else.

But is what we term syllogistic reasoning, reasoning at all? Yes, in the sense that all our reasonings where general terms are involved, when we state the process in full, assume that form. Let the question be, Is this man a murderer?

Certain facts being given, you determine by a process of reasoning that he killed the man. But did he do it with malice? You determine that also by a process of reasoning. You then say that—

Murder is killing with malice prepense;
This man killed with malice prepense;
Therefore this man is a murderer.

The proof of the murder, and the force of the reasoning does not turn on any manipulation of terms, or class relations, but on the facts which give us the right to use our terms, and which enable us to bring the individual into those class relations. It is not proved by the syllogism that the man committed the murder, but the syllogism is the form which the proof takes in our minds when we state it fully and in order. As is stated by President Porter, the relation on which the proof turns is that of reason and consequent.

In its form the syllogism is demonstrative. No one can assent to the premises without assenting to the conclusion, but the evidence for the conclusion is only equal to that for each of the premises, and that can never be demonstrative. Hence, unless we admit the syllogism into mathematics, where I do not think it belongs, it can never give us demonstration. Hence, too, it is evident that the main labor, when we would establish a fact by a process of which reasoning must form a part, will be to establish the premises and bring them together. That being done, the inference, which

is strictly the act of reasoning, is readily drawn. Hence, again, the inadequacy and necessary failure of logical forms taken by themselves, as they were among the schoolmen, in the investigation of truth. Doubtless it is easier to combine and transpose terms variously and ingeniously than to analyze compounds, and unravel complexities, and investigate facts and laws; and the process may tend to a certain readiness and sharpness of intellect, but it can avail nothing by itself, and relatively little in any way to the advancement of truth. If we include in syllogistic logic a knowledge of the concept with its relations of extension and comprehension, or, as they are sometimes called, of quantity and quality, and also a knowledge of the relations in which the terms representing concepts must stand to each other that inferences may be safely drawn, we have a wide and worthy field of study, but less so than that furnished by Experience, Analogy, and Induction. Perhaps it is not more important than the field in which our reasonings respect only individual and abstract notions and terms, and in which the principle of reasoning is either that of identity or equality.

The results of Reasoning are either demonstrative or probable, and this distinction is supposed to turn on the certainty or uncertainty of the conclusion. It does not. It turns on the nature of the conclusion. Demonstration has nothing to do with facts, or with anything that actually exists.

It begins with a supposition. In a mathematical demonstration you do not demonstrate any thing respecting the figure that you draw. Suppose I draw what I call a right angled triangle, I cannot demonstrate that the angle I call a right angle is so. Whatever knowledge I may get of it I must get from the eye or from measurement. What I do then is to make a supposition or hypothesis. I say, let it be a right-angled triangle, and then it will follow that the sum of the two other angles will be equal to a right angle. Or, again, if we suppose A equal to B, and B equal to C, it will follow that C is equal to A. We cannot know that A is equal to B, or B to C, or if we do know it, it cannot be by demonstration. Beginning therefore, as a demonstration always must, with a supposition, it can never prove a fact. We reach what we may call a hypothetical truth, whereas, in probable reasoning, we reach a fact. In the one case we have no uncertainty except that which may be connected with the steps of the process; in the other we have the uncertainty connected with observation and testimony.

But not only the starting point, and so the result, are different in a demonstration, but also the process. To a demonstration it is necessary that there should be intuitive evidence at every step. This is as essential as that it should begin with a hypothesis.

It is to be said of demonstrative reasoning also

that it admits of no degrees. What we demonstrate is necessarily true, true without a doubt. Anything claiming to be a demonstration which does not give us a conclusion of which that can be said, is good for nothing at all.

In all these respects probable reasoning is different. It starts from a fact, or from facts; there is not intuitive evidence at every step, and so it admits of degrees of every shade from the slightest probability up to a certainty equal to that of demonstration. The term probable is unfortunate here as implying some degree of doubtfulness in the conclusion. Ordinarily there is, but we may have from what is called probable evidence, and probable reasoning, a certainty as absolute as from demonstration.

In probable reasoning we start from facts, and we prove facts; in demonstrative reasoning we start from a hypothesis and proceed to our conclusion by successive intuitions; and it seems to me that the processes in the two cases rest upon different principles of reasoning. In the syllogism, saying nothing of the other branches of probable reasoning, we start from a general proposition which includes within itself the particular truth sought, and when the conclusion is reached it may be fairly said to be *deduced* from the premises because it was contained in them. But in demonstrative reasoning, having our definitions and axioms, not, as is commonly said, to start from

as if they included anything, but as conditions of reasoning at all, we start from a hypothesis and proceed, as has been said, by successive intuitions, making as we go such suppositions or constructions as will give us the intuition. To do this may require much ingenuity, and it is a part of the process in the original work, but is no part of the work of those who come after, and is not properly a part of the reasoning. The conclusion reached is not contained in anything known before, but is seen to be true, and is connected with what was known by means of suppositions or constructions made as we go along. If I say that A is equal to B, and B to C, and so on to X, it will follow not only that X is equal to A, but to every member of the series, and this I suppose to be the type of much if not of all demonstrative reasoning. The difference between this and syllogistic reasoning may be illustrated by two possible modes of constructing a bridge. We may suppose a structure fastened to one bank containing in it slides that may be drawn out, if we only know how, till they shall span the stream. Or we may suppose, as is done, that into an abutment made firm on one side there is fastened the support for a single step, and that we then fasten by clamps or bolts to the end of that the support for a second step, and so on till we get over.

The common account of demonstrative reasoning is that it is syllogistic, and properly deductive

rather than constructive; and that it has for its major proposition either the axioms, or definitions, or both. It is said that C is equal to A, in the case given, *because* things that are equal to the same thing are equal to each other, whereas the general proposition is no more evident than the particular case, and is, indeed, a generalization from particular cases, all having equal authority as intuitions.

In presenting my view of this point I am happy to agree substantially with Dr. McCosh in his Logic recently published.

We have then, looking at the subject as a whole, three fields of reasoning under three different principles. The first is that of Experience, Analogy, and Induction, in which the principles are uniformity or similarity. I do not agree with Dr. McCosh in thinking that this can be brought under the syllogism. If it can in form, nothing is gained; for no particle of the certainty belonging to the general axiom can be carried over to any particular case.

The second field is that of general reasoning in which the principle is that of the class relation, or of whole and part by which one thing is included within another, but with implied reasons for their being thus included. This gives us the form of demonstration, but never its reality.

The third field is that which has for its subject individual concepts and abstract terms, and

which has for its principles Identity and Equality.

In connection with this subject of Reasoning there are some inquiries and practical points that need attention, and

First, If demonstrative reasoning, and, indeed, all mathematical reasoning as applied to realities, starts from hypothesis, we inquire how it comes to pass that it can be applied so extensively and accurately in science and in life. It is because we are able in both to make the hypothesis correspond so nearly with the fact; or rather, it is in science because the physical universe is constructed on mathematical principles and we have been able in certain cases to discover what those principles are. If we suppose the form of the earth's orbit to be an ellipse, and that be the fact, we can calculate its time and place. If we suppose the force of gravity to be directly as the mass of matter, and inversely as the square of the distance from the sun, we can estimate it for any given point. If we suppose atoms to unite in definite proportions we can tell the results of a given mixture. So in life; such precision of measurement and weight are reached, that the hypothesis will approximate the fact sufficiently for practical purposes. Still we may see how figures will lie. A man brings you a bill for six cords of wood, or six tons of coal, at six dollars for each. The only thing certain about it is that six times six make thirty-six. When

the hypothesis is at fault, or there is some error in our measures, or weights, or numberings, there are no greater liars than figures.

We see also in connection with demonstrative reasoning the fallacy by which mathematicians are misled when they apply mathematics to the order of nature. That which can be demonstrated cannot be changed by will, and they transfer over to the phenomena and their order the necessity which belongs to demonstration as a process that is concerned only with hypotheses and abstract relations. The influence of this fallacy is subtle and prevalent.

I ask your attention also, and finally as connected with reasoning, to a practical point insisted on by Whately — the difference between proving and inferring. When a man sets himself, or is set, to prove anything, he has a conclusion given him, and his business is to find out all the considerations he can that will sustain that conclusion. A lawyer assumes the defense of an alleged criminal. What is his business? It is to prove that he is innocent. That is what he is paid for. And what does he do? He does not look over the whole case, or care to know anything except what will substantiate the point that is given him to prove. Here again is a lawyer on the other side whose business it is to prove that the man is guilty, and what does he do? He finds out all the facts that bear on that, and presents them as

strongly as he can; and so these men are advocates. Now what does the judge do? He compares all the facts, looks at them impartially on one side, and on the other, and *infers* from them the truth.

This is a point I wish to insist on because most men are constantly advocates, and because I believe that the love of the truth and fairness in searching for it are scarcely less essential to right character and the welfare of society than the telling of the truth. But instead of this the whole intellectual activity of many is spent in seeking to substantiate what they are brought up to believe, or what they are determined to believe because it is for their interest to believe it. Men are born into parties, political and religious, or they are converted into them. They fall into cliques and sets, and once there, they become simply advocates, and truth has nothing further to hope from them in her progress. Or perhaps it is mere will. They have adopted a theory. They have said, "I believe so," and are determined to make out that it is so because they have said it. The sincerity of most men in their belief consists in really believing what they have been taught, or what they wish to believe and seem to themselves to have proved, rather than in honestly seeking to infer the truth. But all this is utterly wrong. In everything that comes up bearing upon the interest of truth or of society, in all party questions,

political or religious, it is the business of every man to put and hold himself in the position of one who *infers*, that is in a judicial position, and to hold an even balance.

We now come to the last operation mentioned as performed by the Intellect, that is

SYSTEMIZATION.

It has been said that unity in the midst of variety is the principle of beauty. Be this as it may, it is the principle of system. In unity, meaning by that a unit, there can be no system. In variety without unity there can be none, but when we bring variety into unity we either form, or enlarge a system. We bring the several parts that seemed unrelated into relation, and, according to the etymology of the word, make them stand up together; and it is among the higher joys from the Intellect to be able to do this in any department of nature or of study. It is, indeed, here, and perhaps here only, that we find the point of contact between the operations of the pure intellect and the sense of beauty. The sense of beauty is first. Partly sensuous, it acts without our thought, but finds gratification also in those deeper relations of unity in the midst of variety which science discovers, and goes with us, luring us on, into the recesses and labyrinths of nature, and finding a higher and purer delight as the sensuous element is eliminated. We enjoy what we see of sys-

tem as it appears superficially, but we seek something deeper in the knowledge of its law. All law implies system. The discovery of a law is virtually the discovery of a system in those things that come under the law, and the history of science is little else than a history of the steps by which diversity has been brought into unity in the different departments of nature and of study. It is just this, the bringing of diversity into unity, that we are now attempting to accomplish in relation to man, and. if one method of study be the right one, it must result in a system.

The right method of study is that of analysis followed by synthesis. In studying a subject, or thing, we examine it part by part. If we find, as we have found in studying the body, that there are parts that are themselves systems, we pursue the same process till we reach that which, so far as we can see, has only the relation of a part. We then study that as it is in itself and as it is related to the other parts, and having done this with each part we are prepared to put them together into a whole which will thus become a system. We may then pass from one related system to another, each being a whole in itself, and yet a part of a greater whole, till we gain such a knowledge of the universe as one great system made up of related parts, as our limited capacities may enable us to reach. Adopting this method we place ourselves at the feet of Nature as learners, and if,

with child-like docility, we recognize as parts what she has made to be parts, and put them together into those wholes which she has constituted, we have a true science. We think the thoughts of God. Our systems are the systems of Nature and our minds are satisfied because there is a natural correlation between the mind and Nature rightly understood.

LECTURE IX.

THE SENSIBILITY. — A GOOD. — BEAUTY. — THE LUDICROUS. — THE AFFECTIVE REASON.

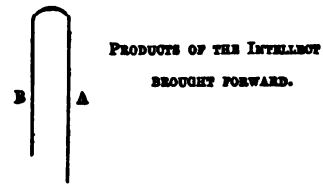
HITHERTO we have considered the Intellect. We now pass to the

SENSIBILITY.

But in doing this we do not leave the Intellect behind us. We take it with us. We combine it with the Sensibility as its condition, and thus find for it a new field, and get from both, as thus combined, new products.

The Sensibility includes all that through which we either enjoy or suffer. Thus viewed it has two sources and forms. As physical beings we have merely sensations, and the capacity for these may be called a physical sensibility; but as intelligent beings we have a wide capacity of feeling from what we perceive and know. We feel because we know; and the Intellect thus becomes the condition of all the higher forms of feeling. The general statement is that each form of our activity is accompanied by its own feeling; and that the character and rank of the feeling will be as that of the susceptibility or power from which it comes.

As having Intellect only you will remember that I represented man by a single vertical line. To represent him as having both Intellect and feeling we shall need two such lines united, thus:



Let the line A represent Intellect as we have considered it, and as now furnished, having intuitions, products of the outer and inner sense, associated ideas, comparisons, reasonings, systems. Let the line B represent the Sensibility, connected, as you see with the Intellect, but as yet unfurnished. Let now this sensibility be awakened by an object addressed to it as well as to the Intellect, and are there necessary products or results, that, as necessary, belong to all men, and that will be thrown back of the two lines, as the intuitions were thrown back of the line representing Intellect? I suppose there are, and whatever those products may be, you will observe that they must have in them two elements, — the intellectual element, and that of feeling also. It will be something that can be designated either as an idea or a feeling. This being premised, I may say that it would be impossible for a person to have a sensi-

bility rightly constituted, and to perceive an object adapted to it, without knowing the object as good, and without having an idea of the enjoyment produced by it as A GOOD. Thus, then, *a* good, or *the* good, I regard as the fundamental idea which is given by a sensibility, given to all men, given necessarily, and holding a relation to those processes which are connected with Intellect and Sensibility combined, similar to that held by the idea of Being in the processes of Intellect alone. You can have no thought of which the idea of Being is not an element, and, the Sensibility being given, you can have no form of activity that is normal throughout, of which good is not an element. Of course a sensibility is capable of working both ways, perhaps necessarily. As a fact, I think that beings with a sensibility in any form are capable of suffering just in proportion as they are capable of enjoyment. But their suffering is not necessary; it is not that which a sensibility was constituted to give, and therefore we say that the product of a sensibility is a good. This may be either from the action upon our organization of those surroundings which God has so wonderfully correlated to it; or from our independent activity; or from the interaction of our minds with other minds; or, which is highest of all, from such spiritual revelations as God can make of Himself directly, and not through his works. In each case we have the same fundamental idea extending it

self through all the operations of the Sensibility, but differing constantly both in quantity and in quality with the faculties exercised, and the objects upon which they are exercised. Always, however induced, there is an activity of our own from which the enjoyment is the immediate outcome as the fragrance is from the flower.

To this word, *good*, I ask attention, because of the different senses in which it is used, and because we can never speak or write understandingly on morals till its meaning shall be fixed. It is, I suppose, conceded by all, that enjoyment, and all enjoyment, is from the Sensibility; and that enjoyment is a good. Is there anything that is *a* good that is not from the Sensibility? All feeling, you will observe, has its origin in the Sensibility. We think, and we will, and act. Resulting from each of these forms of activity there is feeling. Is that feeling from the Sensibility? So I suppose. If not, it would not be *the* Sensibility. But if it is from the Sensibility, then I inquire whether there is anything that can be called a good that is not from that. Suppose all beings as insensible as a stone, could there be anything that would be either good, or a good? There are now many things adapted to produce enjoyment in the Sensibility, and these are good. There are also persons who devote themselves to the promotion of enjoyment in its highest forms, and to its greatest possible extent by putting forth themselves, and leading others

to put forth, the highest possible forms of activity and these are also good. They have goodness, but if there were no enjoyment or satisfaction possible in any sensibility that could become *a* good, there could be nothing good; and there could be no goodness. There could be no obligation to choose in one way rather than in another, and there could be nothing right or wrong. You will see, therefore, that that combination or fusion of Intellect and Sensibility from which we get the rational idea of a good as something valuable in itself is not only essential as a motive to rational action, but also as a condition for the very formation of moral ideas; and it is to that that I think the word good, used as a noun, should be confined. But instead of this, you will find the word constantly used in discussions on morals for goodness. It is not perhaps strange, since we speak so constantly of a good man to indicate a state of the will, that we should speak of the state itself as *the* good; but a state of the Will is one thing, and a state of the Sensibility entirely another. In the one we have moral quality; in the other not, and hence the need of terms that will discriminate them perfectly. We will then call the normal state of the Will goodness; and the normal state of the Sensibility from any form of activity a good; and this we place on the left hand side of the two lines as the first of our regulative ideas in this department, and one that must be a condition for any others.

What other necessary and universal idea have we in the same way? Suppose a person with furnished intellect and endowed with sensibility, to see for the first time a rainbow. I ask you if it would be possible that he should not have the idea of

BEAUTY.

I say the idea, but might also say the feeling, for we use one word as freely as the other, thus testifying to the complex nature and double origin of the product. It is this complex nature and double origin that has caused difficulty in the discussion of beauty. Is Beauty a feeling? So say some. Is it an idea? So say some. Is it both united and yet really one thing, the product of a mental chemistry to be known and treated as one thing, as water is? So say others, and with them I agree. We shall find that there is quite a number of these products the nature and function of which we can understand only as we know their origin. Thus with Beauty. Has it an element of feeling? That must be in the mind, and can be only what it is felt to be. There can be no feeling nor anything resembling a feeling in an external object. So far, therefore, beauty must be subjective. It will be like an odor, the intellectual fragrance of the beautiful object. But, again, is Beauty an idea? Then it must be from qualities in the object apprehended by the intellect, and so far as Beauty is from those qualities in the object which

originate the idea, or rather is those qualities, it is objective. And as we give the name sometimes to that in the object which produces the feeling, and sometimes to the feeling, and oftener make no distinction between the two, it is easy to see how disputants may use the same word and be thinking of different things, or, at least, of different aspects of the same thing, and thus seem to differ when they really agree.

This view of the origin and nature of Beauty will enable us to solve the speculative difficulties respecting it, and it will only be left to inquire what that is in the object which produces the feeling. Upon this we shall not enter. The feeling will vary with its object, from the slightest impression of mere sensuous beauty, up to its more complex and highest forms, till indeed it passes into sublimity, which some regard as a separate element and idea, but which is so far of the same kind that we need not treat of it separately here.

From what has now been said, we feel authorized to put down Beauty as the second joint necessary product of the Intellect and the Sensibility.

What next! There is another part of our nature, somewhat extensive and varied, for which no one word will suffice, but which may perhaps be indicated as well as in any way, by the word Ludicrous, or

THE LUDICROUS.

This gives us a field of the lighter emotions awakened by a perception of some form of incongruity, or of some unexpected and sportive combination, —

> "Smiles from reason flow,
> To brutes denied."

So says Milton, and I think he was right. Brutes are sportive, but I know of no evidence that they have that combined apprehension and feeling, which go to make up either the ludicrous, the ridiculous, or the witty. Clearly we have here again both the idea and the feeling combined into one product.

This field of the Ludicrous we are not called upon to enter. It is legitimate. It is right in its place, and runs out into many forms of humor, fun, and drollery. I will simply say before leaving it, that I do not agree with those writers who hold that laughter aways has in it an element of contempt. I think it often an expression of mere merriment, and in the purest good nature.

We put down, then, back of the two lines, and as our third regulative idea in this department, the Ludicrous. Is there any other idea to be placed there? I think not; and it only remains to inquire what we shall call the faculty or power which gives us these ideas. Sir William Hamilton speaks particularly of the deficiency of our nomenclature in this department, and it is to be regret-

ted. This power — for it is not properly a faculty as not subject to the will — has no name, but it needs one. In its independence of the Will, and hence in its universality and necessity, it resembles what we called "The Reason," when we were considering the Intellect alone. It differs from it only as it acts with the Sensibility, and so has in the product an element from that. What we need, therefore, is the right qualifying word to indicate that. But there is no such word. The only one I can think of that will do at all, is Affective. If we adopt that, we shall call it the Affective Reason, meaning by that a reason whose product has the power of affecting us as a motive, which the ideas of the pure reason have not. This is a real distinction; it is one that needs to be made, and the word is not a bad one. But not accepting this, we may either take a name from one of the minor functions of the power, and call it the Æsthetic Reason, or let it go without a name. I will put the two names down under the products we have considered, and you may choose for yourselves.

In connection with the fundamental idea of Good the Sensibility assumes different forms, which we now proceed to consider. Of these the first and lowest is Appetite, or

THE APPETITES.

These, together with the other forms of the Sensibility that will be considered in this Lecture,

were treated of by me in this place eleven years ago; and what I then said was published in the "Lectures on Moral Science." We may therefore treat them the more briefly.

The Appetites are those cravings of the animal nature that have for their object the well-being of the body, and the continuance of the race. As the means of sustaining and continuing the race, they are the condition of all other forms of the Sensibility, and so are lower than they. Their characteristics are that they take their rise from the body, are periodical, and have a physical limit; and any craving that has these characteristics may properly be called an appetite.

The Appetites commonly mentioned are those of Hunger, Thirst, and Sex. But according to what has just been said, the periodical craving for sleep and for air may rank here. If the intervals of breathing were such as to create a conscious desire for air and an effort to obtain it, no doubt the craving would be ranked among the Appetites. And so, if we would know how many appetites there are, we must inquire how many things there are generically that are necessary for the well-being of the body, and we may be sure there will be within the body a craving for those things. We may give them one name, or different names, but they are really one thing, the manifestation in different forms of one principle, that is, a craving, or going out in all directions after such things as are needed for the well-being of the body.

As the Appetites have the lowest place in our sensitive organization, it is natural that any abuse of them should be concealed; and hence while the corruption and degradation through them are so fearful and extensive, they are, for the most part, covered up. They are so until human beings become lost to shame, for shame is the principle placed in our constitution to guard against what is low and mean, as conscience is to guard against what is wrong.

In their natural state, without artificial stimulants, and with a regular and adequate supply of food, the Appetites are self regulating, and when they are thus left to themselves, or are in any way properly regulated, man is not degraded by them. Let a man eat that he may live and do his proper work, and he is a man; but let him live that he may eat, or give himself up to any form of sensual or merely sensitive gratification, and he is degraded; his face is towards Egypt and its flesh-pots to the neglect of the pillar of cloud and of fire, and of the promised land.

But there are artificial appetites as well as those that are natural. These have all the characteristics of an appetite except its beneficial effects. They often bring men into a bondage more absolute and degrading than that from any natural appetite; but as they do not belong necessarily to the constitution, they need not be treated of here. I will only observe that the strong probability is,

that God gave man originally as many appetites as it was best he should have; and that I do not believe that any man ever gained anything on the whole by creating an artificial appetite. I believe that purer and more lasting physical enjoyment will come from the natural appetites alone, if properly regulated, and that the system will be better fitted through them to minister to those higher functions and enjoyments of the intellect and the heart that belong specifically to man.

Appetite is a craving; but how shall it know where to find its object? The young calf craves food, but how shall it know where to find it? Here comes in

INSTINCT.

This is needed where it is impossible that Intellect should act. The Appetite craves, Instinct directs. The Appetite is presentative, the Instinct is regulative. Instinct is a kind of unintelligent, affective reason, as that has just been defined. It directs to ends, but presupposes that means and conditions are supplied by an intelligence out of itself, and if these are wanting it knows nothing of the mode of supplying them. It forecasts the seasons, and proceeds on the widest knowledge of the laws of nature and of the order of events. It knows the fact of the law of gravitation, and the doctrine of specific gravities. The setting hen turns over her eggs regularly by ruffling them, because

she knows that the specific gravity of the yolk is greater than that of the white, and that if the yolk should touch the shell at the bottom, it would prevent the growth of the chick. That is a thing that men did not find out for thousands of years. Hens knew it always. But then the hen does not know a glass egg from a real one; she does not know a duck's egg from one of her own, and is utterly bewildered when the young ducks, guided by an instinct which tells them that they have webbed feet, run at once into the water. Instinct assumes a given condition of things, which nothing but intelligence, and I may say a Divine Intelligence, could arrange. Let that condition exist, and nothing can be more admirable and perfect than its movements and their results; but change the condition and it is wholly baffled. The propensity works on, but works in the dark. A beaver, caught and confined in a room, will gnaw any wood it can find and make a dam of it where there is no water. That is instinct. When it is perfect it has no power to profit by experience, or to modify conditions. In that case Instinct is at its maximum, and Intelligence at its minimum; but as we rise in the scale intelligence increases until we come to man, and in him intelligence is at its maximum, and instinct at its minimum. This relation of Instinct to Intelligence, was, I understand, put upon the board by President Chadbourne in his Lectures here two years since on Instinct, in this way: —



Let the lower triangle represent Instinct, and the upper one Intelligence, and it will be seen that as we go upward Instinct diminishes, and Intelligence increases, until Instinct has come to a point, and Intelligence has reached its maximum.

It is to be said, however, that we never reach a point where Instinct is wholly absent. In going up, according to the system we are working out, we leave nothing behind, and so we carry Instinct with us, or something of the same nature, all the way up. The principle of Instinct is involved in all involuntary tendency towards an end; and when it is unperverted man may rationally commit himself to its guidance. An intelligent, or rather, a rational being, having an instinct, knows that instinct to be what it is, and knowing that, he may rationally, and most wisely, commit himself to its guidance.

We now pass to

THE DESIRES.

These have the same relation to the well-being of the mind that the appetites have to that of the body. If we would know how many appetites there are, we must inquire how many things differing generically there are that are needed for the well-being of the body, and we may be sure there

will be within the body an instinctive craving for those things. We may give them one name or different names, but there is really one principle, that is, a craving or going out in all directions for that which is needed for the well-being of the body. So it is with the Desires. They are cravings for those things which are necessary for the upbuilding of a perfect mind. What then are those things which it is necessary our minds should have that they may become, and continue to be, what they are capable of being?

In the first place, if we are to be or to do anything, it is necessary that we should continue to exist. We put down, then, as the first and lowest of the Desires, that of

CONTINUED EXISTENCE.

Continuing to exist, we shall need to have, and to hold in our possession, that which will enable us to enjoy our existence. This gives us

THE DESIRE OF PROPERTY.

Existing, and having that which will enable him to enjoy existence, man needs to know how to use himself and it. Hence he has

THE DESIRE OF KNOWLEDGE.

This desire has, however, wider relations than would be thus indicated. Knowledge is the condition of all rational action, and of all the higher emotions.

Existing, possessing, knowing, man is also capable of doing many things, and of becoming what he is not. This implies the power of doing and becoming. It evidently belongs to the perfection of our nature that we should have power, and hence we set down as next in order

THE DESIRE OF POWER.

The desires already mentioned are requisite to the perfection of the individual. But man is placed in relation to his fellows, and he needs some desire that will make him instrumental in the promotion of their well-being, and the perfection of society. Hence he needs, and has,

THE DESIRE OF ESTEEM.

These five seem to me to be the original and primary desires. The words indicating them are put in their general form, as Property, for instance. What is property? It may be farms, houses, bank stock, money. The term simply groups in a class all those things with reference to each of which the desire acts specifically; and I suppose that these are original desires and act immediately and necessarily on the presentation of their objects.

But besides the desires just mentioned, there are those who contend that we have a desire of Happiness, of Liberty, and of Society.

What has been termed the desire of Happiness, I prefer to speak of as

THE DESIRE OF GOOD.

This term I prefer, because it includes in the minds of all, as the term happiness does not, all the normal products of the Sensibility; and it is of all those products that we are now speaking. The normal product of the Sensibility in any of its forms is a good, and is desirable in itself; but with many the term Happiness is contrasted with pleasure, and does not include the good that comes through the sensitive organization. The term also represents to most minds a permanent state in which there is an aggregate of good, and a preponderance of it over suffering, whereas the root of desire, its generic element, is found in the inherent desirableness of every normal product of the Sensibility. We here reach, as in the Intellect, a simple and primitive element. Thought, the product of the Intellect, is essentially intelligent. The Intellect is inherently and natively a Knower, and knows itself as such. In the same way the normal product of the Sensibility is essentially desirable. Inherently and natively the Sensibility is a giver of good, which is immediately and necessarily known as a good, and so as desirable.

But admitting what has now been said, ought not the desire of Good to be placed among the original and primitive desires? Does not every one desire good? Yes, but the peculiarity is

that no one can will to seek good directly. The mechanism of the constitution is that we have specific desires for individual things with reference to which we can put forth specific acts of choice and volition, and that on the attainment of these things good comes spontaneously. We desire immediately, and choose and take the bread; its sweetness and nourishment come of their own accord. As I have said elsewhere, the good "does not lie proximate to the will." It is the common result of all forms of activity when objects directly chosen are attained. Entering thus as the common element into all the desires, it cannot be classed as in the same rank with any one of them. It has, indeed, the same relation to all specific forms of desire that consciousness has to all the other mental operations. It is something different from any one of them; it is common to them all, and is that without which no one of them could be.

We conclude, then, that it would not be philosophical to class the desire of Good, or, if any choose to call it so, of Happiness, with those specific desires, by the objects of which the Will is directly called into action.

In connection with the view now presented, it may be well to notice the provision made in the constitution for activity as the condition of enjoyment. In strictness all enjoyment is from activity, but it differs as the activity is originated from

without or from within. Enjoyment from activity originating from without, is sometimes called passive enjoyment and pleasure, and it is not as high as that from activity originated from within. The highest enjoyment is an involuntary result of activity originating from within, coming from it as the fragrance from the flower; and the higher the faculties brought into action, and the more intense the activity, if it be normal, the higher will be the enjoyment. In no other way is there enjoyment to

"The rapt seraph that adores and burns."

The highest results, either for himself or others, can be reached by man only through intelligent action originating from within.

And what is true of Good as a condition of Desire, is true of

THE DESIRE OF LIBERTY,

as a condition of action. By Liberty here is not meant that liberty of choice without which there cannot be a will in freedom, but the liberty to carry out our choices in action. A man in prison has, as a man, all the liberty of choice, and all the elements and conditions of freedom under a moral government that are possible, but he has not liberty of action. Of beings born with powers of whatever kind, it is to be said that they are not so much born with a desire of freedom, as that they are born free, and naturally

struggle against whatever would limit their legitimate action. To be born with that which may be taken away, and will then be desired as the condition of obtaining other things, is wholly different from being born with a desire of that which is to be attained. Like that of good, the first will be a general and constant element, and cannot be properly classed with the specific desires.

It only remains to speak of

THE DESIRE OF SOCIETY.

All the writers place this among the original desires, and perhaps rightly. I have no zeal about it. There certainly is a gregarious instinct among animals, and perhaps among men, but society is so far something that we are born into, and a condition for the gratification of other desires, and for the exercise of the affections and higher faculties, that I rather prefer to place it with the desire of good and of liberty, and to write it down so as to show that it enters as an element into the operation of other faculties.

The place I give to these three desires — that of Good, of Liberty, and of Society — does not disparage them. It makes them more fundamental as pertaining more fully to our nature, as entering more deeply into its operations, and as involved in everything that is dearest to us.

Of the Desires in general it is to be said, that

while they have reference to the good of the individual, they are not selfish. They may become so, or they may be exercised in the interest of benevolence. How is a man to be effectively benevolent unless he has property, or power, or knowledge, or esteem? He has power to do good precisely as he possesses these, and in gaining them through the active operation of the natural desires, he may be acting benevolently. It is a misapprehension to suppose, when a man is seeking to build himself up in these things, that he is necessarily acting selfishly. He may be seeking to build himself up in that nature which God has given him, and which he is under obligation to perfect, and, as an instrument of good, to make as efficient as possible. The man who can gain the power to wield a great assembly for good, to put down oppression, to sit as a judge and direct the judicial sentiment of the community, is in fault if he does not do it.

But, while the Desires are not necessarily selfish, they tend in that direction, and we are to be on our guard against the law by which they act.

The Appetites have a physical limit, which operates as a kind of bodily conscience, but if a man puts himself under the control of one of the desires there is nothing of the kind. On the contrary, if a man puts himself under one of these desires, as that of property, it will grow by being indulged, till he becomes absorbed and en-

slaved by it. He may say that he cares nothing for property except for its use, — and perhaps he does not at the time; that he will go on getting it up to a certain point and then devote it to a given use; but as he goes on and accumulates he holds on to it with a firmer grasp, and when he has the ability to do what he thought he would, he has lost the disposition, and perhaps even becomes miserly. So is it with all the desires, and therefore, as I have said, we are to be on our guard respecting them.

The Appetites and the Desires have reference to self and its well-being; but we need, in addition to the desire of esteem, a form of the Sensibility which will bring us into relation to others as also capable of well-being, and this we find in

THE NATURAL AFFECTIONS.

These are wholly different in their nature from the Desires. As Affections they do not appropriate anything; they give. At the same time they contain in themselves an element of desire, so that the Desires are a condition for the Affections. This is so, because if there be an intelligent affection for any being, or, indeed, an affection of any kind, there must be a desire for the well-being of that being. Hence the Affections are conditioned on the Desires. They take that desire of good for ourselves through which we come to estimate good

rightly, and make it the basis of a feeling towards others by which their good becomes our immediate object, so that we are able to love them as ourselves. This is true of the affections in general, whether natural or moral, so far, at least, as there can be said to be love in natural affection. They have the good of others for their direct object.

The Natural Affections differ from the moral, in manifesting themselves spontaneously and with no reference to any previous action of the Will; whereas the Moral Affections depend, both for their being and character, upon the previous action of the Will. Indirectly, and after they have revealed themselves as independent facts in our constitution, the Will may have power over the Natural Affections. They may be indulged and cultivated, or they may be repressed and dwarfed. Hence want of natural affection may become, as it is made in the Scriptures to be, an evidence of moral depravity. These affections are common to both animals and man. Rising spontaneously, they prompt both to do what they can for the good of those that are made naturally dependent upon them.

The Natural Affections have generally been divided into the benevolent and the malevolent. These terms I do not accept, or, at least, I do not think them happy. They imply the action of a will fully constituted, whereas we have not yet reached that. In the proper sense of those words

I do not apprehend that an animal can be either benevolent or malevolent. Where an animal, as the parent bird, does good to another, it is from no rational estimate and choice of the good as a motive lying before it, and so as good willing, but from a beneficent, spontaneous, constitutional impulse, prompting from behind; and so far as man is governed by mere natural affection this is equally true of him. And while this is true of the good done, it is equally true of the beast of prey that he has no malevolence towards his victim. He does not hate him; he simply wishes to eat him. What, then, shall we call these affections? Those which lead to the doing of good I would call *beneficent*. They are so; just that, and nothing more. Whether in animals or in man, there is no benevolence about them.

The beneficent affections, as thus defined, include a wide range, and play an important part in both animal and human life. They correspond throughout to those natural relations, as of parent and offspring, through which there is mutual dependence, and on which life in communities must depend.

But, calling those affections beneficent which have for their object the production of good, what shall we call their opposite? They have been called "malevolent," but there is in them properly no will. They are from a tendency, a mechanism, a nature. They are a part of an original consti-

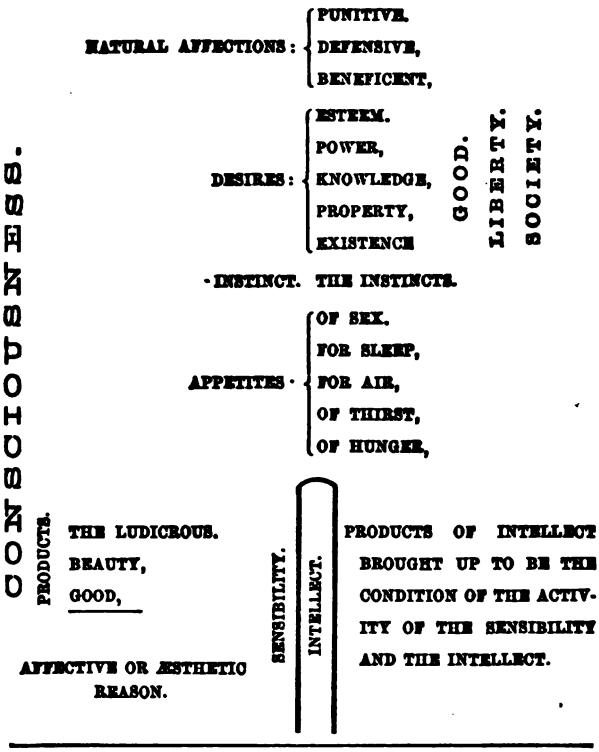
tution, and have for their object, not the production of misery as such, but the well-being of the individual, or of the community of which the individual is a part. It is here that our nomenclature is most deficient. We need some word to indicate that inherent something in everything that has life by which it asserts itself, and its right to be, in the full exercise of its legitimate powers, and this, if need be, to the destruction of that which opposes itself to it. Up to this point we might, perhaps, call the affection *Defensive*, but it often goes further. While there can be, in this region, no conception of punishment in its proper nature, there is evidently something retributive. The foundation for this, however, lies in the being, not as malevolent, but as a guard against future evil. I would then call those Natural Affections which are productive of evil to others, either simply Defensive, or Defensive and *Punitive*. This, like Beneficent, would indicate their office in the constitution. There is no natural affection, either in animals or in man, that has for its object the production of evil for evil's sake.

A difficulty with us in treating of the Natural Affections is from the tendency of the Moral Affections to blend with them. This blending is inevitable, and hence the impossibility of our interpreting with certainty those actions in animals which seem to correspond with our own. In judging of the characteristics of either men or

animals we need to know their natural affections, as modified by their constitution, for individuals of the same species differ greatly in regard to these; but in judging of character we need to know the moral affections.

In connection with the different forms of the Sensibility which we have considered, there naturally arise the emotions of hope and fear, of joy and sorrow. Indeed, desire and affection, with the prospect that their object will be reached, become hope; with the prospect of failure, they become fear. Attaining their ends, desire and affection become joy; failing of them, they become sorrow. Persons habitually anticipating and hoping for the objects of desire and those proposed by affection, are cheerful; those habitually anticipating the reverse, fall into gloom and settled despondency. "Hope deferred maketh the heart sick; but when the desire cometh it is a tree of life." Thus do we find in the Sensibility the source of our activity; and thus do we see how there spring up from within it, as Hope and Fear, the two great and opposite gales of life.

We have thus finished what I propose to say on this part of our nature. If we present it at one view, in a diagram constructed according to the principle we have adopted, it will stand thus (reading it from the bottom upward as we do with all other diagrams): —



INTELLECT AND SENSIBILITY.

LECTURE X.

INTELLECT, SENSIBILITY, AND WILL. — THE PRACTICAL REASON. — PERSONALITY, CAUSATION, FREEDOM, OBLIGATION, MERIT AND DEMERIT, RIGHTS, RESPONSIBILITY, PUNISHMENT.

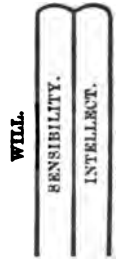
We have not yet found Man. Unconsciously, perhaps unavoidably, we have carried ourselves back, and have supposed our whole selves to be present in the different processes we have considered. Doing this, it is impossible for us to be sure what the processes of a mere animal are, or what the condition would be of a being having intellect only, or intellect combined with feeling. These different departments can be conceived of, and be considered separately, just as we can conceive and treat separately of the sides and angles of a triangle, but so great is their unity that one seldom if ever acts without the other. The elements are so blended that it is difficult to analyze them; and besides, what mankind generally care for is the result, and not the elements or combination by which it is produced.

Thus far we have considered the body, and the two lower divisions of the mind, the Intellect and the Sensibility. These are indispensable conditions for the being and action of

THE RATIONAL WILL.

Without the Intellect there is no light, without the Sensibility there is no motive. As distinguished from mere impulse, rational will involves rational choice; but without the Intellect there can be no rationality, and without the Sensibility there can be nothing to choose. With these we have all that we need, not as a cause, but as a condition for the Will.

As possessed of Intellect alone, we have represented man by one line; as possessed of Intellect and Sensibility we have represented him by two lines united, and we now represent him as possessed of Intellect, Sensibility, and Will, by three lines united, thus, —



Before the Intellect, which stands in front, we bring up, and suppose to be present, the various products of the Intellect and the Sensibility in their combination. These the Intellect apprehends. By them, as thus apprehended, the Sensibility is

affected, and then the Will acts in view of the operations of both the Intellect and the Sensibility. Objects presented to the senses — objects of Appetite, of Desire, and of the Affections — are supposed to be presented before the man now fully constituted, and we inquire what new phenomena *must*, and what *may* result from the possession of Will.

But first what is Will? By Will, or *the* Will, we do not mean anything that has a separate and independent existence. We mean by it that constituent of man's being by which he is capable of free action, knowing himself to be thus capable; just as we mean by the Intellect, that constituent of his being by which he is capable of thought, knowing himself to be thus capable. If we would understand the nature of Will we must go back to the beginning of our course, and we shall find that there is in it a synthesis of both of the great elements which we have considered, and something added. We began, as you remember, with gravitation, that is with *force*, — that mysterious something which all classes of thinkers are obliged to recognize and assume, but which nobody comprehends; we began with that, acting necessarily, and, so far as we can understand, by a physical necessity. In the same way we knew all the physical and vital forces, — Cohesion, Chemical Affinity, Vegetable Life, and Animal Life, as necessitated. We next passed to the Intellect and its different faculties, and what did we find

there? We found, in addition to force, the power of insight and comprehension. And here again, the movement was subject, if not to a physical, yet to a logical necessity. In the Intellect, taken by itself, there is no freedom. But rational choice, which is the fundamental, the voluntary, and moral part of the Will, is impossible without comprehension; and volition, which is the executive part of the Will, is futile and nugatory without force.

Thus do these two, the power of choice and the power of volition, become constituents of the will, essential powers of a being acting rationally; and thus does the Will imply and involve the two great elements of Intellect and Force. Intellect it implies in connection with choice, for the purpose of comprehension and rationality; and Force in connection with volition, for the purpose of execution. We see then, at this point, distinctly, the two elements of which Will is composed, the power of choice and the power of volition, each of which is essential to the being and the expression of Personality, in which, in order to constitute Will, the two must unite. Choice presupposes both Intellect and Sensibility; Sensibility and its products to constitute ends, and Intellect to show their relative value and the means of attaining them. Volition presupposes force, or rather is nugatory except in a being endowed with force.

These elements of Will, choice and volition,

have not been distinguished as they should have been, and in consequence, the discussions respecting the Will have been perplexed. The cause of the perplexity is that one of the elements is subject to necessity. What we need to know is the point of freedom. That is in choice, and in that only. Choice being once fully made, volition follows of course. It may not follow at once: the choice may abide alone, but when the volition comes it is born of choice. There will of course, then, be a radical difference between the idea of freedom as consisting in the power of choice, and in the power to carry out our choices. The one is absolute, and so belongs to us that to be deprived of it we must be destroyed. The other is contingent, and we can be deprived of it by accident or disease, or by the will of others. The one is the essential element of freedom manifesting itself in the spiritual realm, and is the immediate object of the divine government; the other simply instrumental and executive, and is that of which human governments chiefly take cognizance.

And in connection with these two elements of Will, the one free and the other necessitated, we may see the harmony there is between freedom and necessity, and the need of necessity in order to freedom. If the freedom is to result in responsibility, or is to avail anything with respect to conduct, there must be in connection with it a sys-

tem of necessity. A man stands by a stream of water. He has the power to turn it in this direction for the purpose of irrigation, or in that for the purpose of destruction, and this power he has, with the attendant responsibility, simply because the stream is subject to invariable and necessary law. If he could not control it by such a law, he could not know what the consequences would be, and would not be responsible for them. Hence the region of freedom, to which we now come, is wholly conditioned on the previous regions of necessity — physical, vital, and intellectual — through which we have passed.

In connection with this control of force by the Will, implying, as in itself, both force and causative energy, it is to be said that it is from the Will that we have the origin of our ideas of force and causation. It might be supposed that we should know force and causation on simply beholding physical changes. Not so. If we had not had these ideas from our own causative energy, we should have seen nothing in physical changes but mere succession; but, as inherent in mind, such causative energy must reveal itself to mind as a matter of course. Hence in knowing himself as possessed of will, man must know himself as a cause, and whenever he sees causation exerted in connection with evidence of intelligence, he naturally attributes it to mind. This is a cardinal point, because the whole evidence for the presence

of mind in nature turns upon it. The order of nature depends upon its changes, and if mind is not the original cause of the changes then it is not of its order, and so there is no proof in nature for the being of a God. This is what Positivism says. It says that we see nothing, and know nothing, and can profitably speculate about nothing except mere orders of succession. But this is virtually atheism. We do know causation as belonging to ourselves. We recognize intuitively the results of intelligent causation, and from such results can rationally infer their cause.

In thus reaching a Will in freedom, a rational Will, we make a great transition. Points of transition we have reached before, but none equal to this. Our progress upward has not been by a continuous line but by steps bringing in new elements, and raising us on to a new platform. So I have represented it in the figure. Gravitation does not involve cohesion, or shade into it. Cohesion is a new thing brought in. So is chemical affinity. So is vegetable life; it is a thing wholly new. All the way up there are points of transition in which we come to something absolutely new; but, as I have said, there is no point like this. We here reach, not spontaneity, which is wholly different from freedom, though sometimes confounded with it; but that which stands above all spontaneity and watches over and controls it. In adding the Will we find the man; we constitute

the Personality. Not that Will constitutes the person, or is more essential to it than Rationality, but that we do not get the person till we have Intellect, Sensibility, and Will combined. Then we have a Person. We then reach a responsible cause that can intelligently choose between different results, and can cause those results to be as it chooses. We reach therefore the region of character, of obligation, of right and wrong, of sanctities, of the possibility of worship, and of eternal life.

But it is one thing to constitute the mind in its Personality, and another to furnish it. We saw that by the addition of the Sensibility new material was furnished for the Intellect, and so it is here. By the addition of the Will new material is furnished both for the Intellect and the Sensibility. It is, indeed, in this way that we have the highest and richest materials for both. These materials, though we are in the region of freedom, are given by necessity. They are the phenomena that *must* be in consequence of the addition of Will, and we proceed to inquire what they are.

You will remember that when we represented the Intellect by a single line we had certain things presented in front, and then certain ideas which originated from the Intellect by necessity, and were thus the common inheritance of the race, such as time, space, etc., were thrown back of the

line. In the same way when we had the Intellect united with the Sensibility we had certain products thrown back which belong to all alike. In respect to whatever is in front of the one line, or the two lines, men differ indefinitely; but in respect to what is back of them they are alike. And so it is here. When the three, Intellect, Sensibility, and Will, act together we shall have certain products, call them ideas, or feelings, as you please, that will be necessitated, and so, common to all. What are these products? This is a question of much interest.

The first product, and one conditional for all others in this department, will, I suppose, be the idea of

PERSONALITY.

We have constituted the person, and now, as it belongs to the Intellect to know itself as Intellect, and to the Sensibility to reveal itself as Sensibility, so it belongs to the very constitution of a person that he should know his own Personality. And just as the notion of being connects itself, and becomes interfused with, everything that follows it, and as the notion of a good connects itself with everything that follows after we introduce a Sensibility, so the notion of Personality will go forward and upward and connect itself with everything that shall follow. Though taking up into itself so many elements, and thus complex in its

origin, this idea of Personality presents itself as one thing. It is one, and it is recognized, and its power is felt by every one, whether he has ever heard of metaphysics or not. In the days of slavery the question was whether you might sell a man. We said a man was not a thing, he was a person, and everybody knew there was a fundamental difference between the two.

It is, in my judgment, here, and next, that we have the idea of power, and so of

CAUSATION.

Causation implies antecedence, and the uniform antecedence of the cause as related to the effect. This antecedence is perceived by the Intellect, and is supposed by Positivists to be all that we know of causation. We suppose, however, that antecedence is merely incidental, a necessary relation certainly, but not involving the essence of causation. We are causes. We exert force. We put forth energy. We know ourselves as doing this. We thus gain the idea of force and of causation, and by necessity connect these with all perception of change, whether physical or mental. We thus have the original and necessary idea of cause, as involving, not merely antecedence, but force; and the axiom which connects itself with it is, that whatever begins to be *must* have a cause.

What is the next idea? I suppose it to be one of which I have already spoken, that of

FREEDOM.

There is no personality where there is no freedom; and without the idea of freedom there is no possible conception of a will with any apprehension of what a will is. As we have seen, this idea of freedom belongs to that element of the will which we have called choice, or the power of choice. In that is the freedom, known as such at once or not known at all, given as a simple ineradicable element of our conscious life. Let the opportunity, or, it may be, the necessity, — for, paradoxical as it may seem, man is under the necessity of acting freely, — let the opportunity or the necessity of choice between two different kinds of good be presented, and the idea of freedom at once and necessarily emerges. Let, for instance, a man be required to choose between property and integrity, and he knows by necessity, and with a conviction which nothing can strengthen, and which nothing can shake, that he is free to choose either. The discussions about the freedom of the will have been endless, but nothing has ever shaken the conviction of the race in regard to the elementary idea of freedom as involved in choice. Practically this idea of freedom is at the basis of all obligation, and of all responsibility, neither of which can be conceived of without it.

After causation and freedom we have the two

fundamental and correlative ideas of Rights and Obligation. Of these, Obligation has been placed first in former editions both in the text and on the chart. I now think that Rights should be placed first, and that they should be brought together. The change is accordingly made.

RIGHTS.

This is a separate, independent, and original idea, and is founded on good. In connection with our own good we have a right to things; and in connection with the good of others we have rights over them.

When a man has procured by his labor an object of one of the natural desires and another would take it from him, the idea of a Right is immediately and necessarily given. Its relation to Obligation is that obligation is its correlative. If a man has a right to anything, others are under obligation not to interfere with that right. In this way every natural principle of action has its corresponding right, and its reciprocal obligation.

Again, from relations independent of our will, the good of some beings can be secured only by the power, and care, and guidance of others. This gives the right of authority on the one part, with the corresponding obligation of obedience on the other. There is also an obligation on the part of the superior, first, to exercise authority; and second, to exercise it within the limits required by

the good of those governed, regarded both as individuals and as a community.

Having, then, a Person, who is a cause, and a free cause, the next idea will be that of

OBLIGATION.

Here, as in good and in beauty, we have a single product resulting from the action of more than one power. Obligation is, in the first instance, obligation to choose, and, whether regarded as an idea, or a feeling, or both, is conditioned on the presentation, through both the Intellect and the Sensibility, of two objects of choice, generally different kinds of good, between which we are necessitated to choose.[1]

This necessity of choice we are to notice. I have before spoken of the necessity of thought. We may think of one thing and not of another, but think we must. And so it is here. We may choose one thing and not another, but choose we must. A continual state of choice is as much a condition of our lives, at least in our waking hours, as continual thought. Is it said that of two objects presented we may choose neither? True, but the refusal to choose is itself an act of choice. It is the preference of something else as more desirable than either. Besides, in most cases, the conditions of life are such that an alternative is unavoidable. We must either eat, or go

[1] See Appendix.

hungry. We must study, or remain ignorant. We must labor, or fail to enjoy the fruit of labor.

This being understood, it is to be observed that the necessity of obligation is as absolute as the necessity of choice. Obligation is a moral phenomenon, and the spontaneous presence of it on given conditions is a revelation of the moral nature, as the spontaneous presence of thought on given conditions is a revelation of the intellectual nature; for wherever there is a necessary result on given conditions there is a nature, and that nature can be known and judged of only by such result.

We have, then, the necessity of choice of some kind always present; and the necessity of obligation on certain conditions. What are those conditions? As has been said, they are the presentation of two or more objects of choice that differ in the quantity or the quality of the good supposed to be in them, and that can be either gained for ourselves, or conferred upon others. Let us suppose then that a choice is to be made between two forms of good as presented in two different objects or ends, and that one of them is seen to be higher in kind and more valuable than the other. I ask whether it is conceivable that a man with faculties unperverted should not feel under obligation to choose the higher and more valuable. I think not. If a sense of obligation would not arise of necessity the man could not have a moral nature. It is the necessity and certainty of a thing

under its conditions that make it to be a nature. The man is under no necessity of choosing the "better part," but would be under a necessity of feeling obligation to choose it, and of choosing between it and that which was less valuable. In all rational action a sense of obligation to choose the higher good accompanies the apprehension of that good, and there can neither be choice, nor a sense of obligation to choose, without an apprehension, direct or implied, of good in the object or act to be chosen. That which has no good in it, and is known to have none, cannot be an object of choice.

We have then, both Good and Obligation, as motives to choice. What is their nature and relative influence?

Good is fundamental. Known directly or implicitly, it is, as has just been said, the condition of obligation, and is the ultimate reason for choice. It stands before the mind as a reason and is chosen for its own sake. It is ultimate. Something ultimate we must have, or there would be no end in going back for objects of pursuit, and this we find in Good known as such in some form of the Sensibility, — known as having value in itself. It is the apprehension of this as an element underlying, interfused, or standing in front, and as having value in itself, that makes conduct rational as distinguished from impulsive. There is great beauty in the mechanism of impulses as driving the being

on to its good with no comprehension of the mechanism on its part, and, with no apprehension of the good to be reached; but it is another order of things when all there is of mechanism and impulse is comprehended, and when the good stands in front, or is in any way apprehended as a reason for choice, and when, in order to be attained, it must be rationally chosen. Then, and then only, can we have a philosophy of conduct.

Such being the part performed by Good as a motive, what is that performed by Obligation? This is peculiar. Being a primitive manifestation of the moral nature, it stands by itself as much as thought does. As from the Intellect, obligation is rational; as from the Sensibility, it is emotive. It has, therefore, in it an element both of reason and of impulse, and so is capable of becoming, and does become, an authoritative impulse. But an authoritative impulse is law, and so far as we can see, is the only possible form in which there can so be a law within the constitution that a man shall become a law unto himself. As authoritative, law must be both promissory and minatory, for anything claiming to be a law without a sanction express or implied would be no law. But if promissory and minatory, then of what? It must be of some good on the one hand, or evil on the other, that may be realized in the Sensibility.

Thus do we find the deep harmony there is between good and obligation acting as motives. Not

only is good the condition of obligation, since obligation arises on the apprehension of it, and requires it for its sanction, but they are conspiring forces. In a normal state the free choice would always be of that good for its own sake towards which the impulse that is in obligation would tend, and so we may see how, instead of a bondage, all service under the law of righteousness may become perfect freedom. Nor, in speaking of the harmony of good and obligation as motives, may we omit to mention the new and high source of good opened to us in the sensibilities from the moral nature which are revealed in connection with the sense of obligation and its results. This good reveals itself as a motive from the first, and before acting, in the way of promise; and immediately on acting in accordance with the sense of obligation, which becomes conscience when our own actions are concerned, it becomes a song that accompanies us through our pilgrimage so long as the impulse there is in obligation is heeded.

When a greater and higher good as compared with a lower is presented, perhaps all will agree that we must feel obligation to choose the higher; but are there not acts and courses of conduct in view of which obligation arises when there is no distinct apprehension of good, and none at all except as it comes in the promise implied in the sense of obligation itself? I think there are. If there were not there would not be that adaptation

of man to his position that we find everywhere else. In early life, and often subsequently, all are so placed as to be unable to apprehend intellectually the proper grounds of conduct, and therefore we might expect that the moral nature, as sensitive, would have a feeling of obligation analogous to instinct in animals, and directive for man in reference to his highest good. Such a feeling there is, but it is merely impulsive, and can never be the ground of a philosophy. It can never be the basis of a system of comprehension by which man knows himself to act intelligently with reference to all the impulses of his nature. Always instinct tends to the highest good. It has its basis in the intelligent recognition by Him who gave it, of the highest good of the animal, while there is no conscious recognition of that good by the animal itself. And so it is here. The impulse may be rationally accepted as the ground of conduct, but so far as there is any ground for the comprehension of the conduct as rational, or for any philosophy, it must be found in the underlying idea of good. When legitimate, this impulse of obligation binds us by its very nature; but as an impulse, it is to be rationally tested like all others; especially since men have often believed themselves impelled by it to perform the most wicked acts.

It is in the two ways just named that I think obligation arises; but what of the idea of right, does not that belong here? You will observe that I

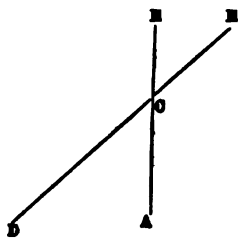
have spoken of the obligation to choose, and the obligation to act. Between these, I make a distinction corresponding to that between choice and solition. Obligation to choose arises immediately in view of the higher good, and this act of choice is a perfectly simple act. No means are needed. Let a higher and a lower good be presented between which a man must choose, and he is to choose. That is all. It is a simple primitive act, which no man can explain, or make more simple, and which no man can tell another how to do. In that is freedom, inherent, essential. He does it, indeed, under the sense of obligation to choose the higher good, but there is no compulsion. Here there is no need of the idea of right as I use that word, because the obligation to choose arises immediately from the apprehension of the good itself; and if we have the sense of obligation that is all that we need. Practically, the idea of right avails nothing except as it is the basis of obligation, and here, in the incipiency of moral action, we have a basis without that. The obligation here is obligation to choose. But choice is one thing, and the volition and executive act by which the choice is carried out is another. In choosing there are no means, and no possible difference of methods. The simple question is, will you choose that which you know yourself to be under obligation to choose; yes or no? But in volition, in acting, in seeking to carry out the choice, and realize the end, means must come in,

and there is room for a difference of means and of methods.

This brings us to choices of a different order; the choice, not of ends, but of means and of methods; and here comes in the idea of right and of obligation as connected with that. Of two courses of action equally compatible with the rights of others, one, it may be, will more effectively secure that good sought than the other. Such a course will be right, and there will immediately arise a sense of obligation to pursue it. As I understand it, right always carries with it a sense of obligation. They go together. The idea of right does not come in originally as the foundation of the obligation to choose, but obligation to act in a given way arises immediately from an apprehension of the rightness of the act, that is to say, from its tendency to accomplish the end. Still there would be no obligation but for the relation of the rightness to some good. If there were no relation of the right act to some good, there would be nothing either right or wrong. Anything moral or immoral would be impossible. It will be seen, therefore, that I derive the whole moral value of right from obligation as primitive, whereas others derive the whole force of obligation from the idea of right. We can, they say, be under no obligation to do anything except what is right, and because it is right. To this, I agree so far as obligation to act outwardly is concerned, but I also say that we

are never under obligation to do an act as morally right, for which there is not a reason in some good besides its being right, and on account of which it is right.

It may seem trivial, but having illustrated other points on the board, let me attempt this. A boy is sent to school from the point A. The school-house is at B. At the point C, he meets a boy who asks him to go with him to the point D and steal some pears. Here we have room for motives that are higher and lower, that may decide the question irrespective of obligation. On the one hand the boy may love study. He may wish to please his teacher, or his father, or may fear punishment. On the other hand is appetite and the



love of truancy. The alternative would be between taking the road to B or D. He would not think of going on in a straight line to some indefinite point, E, for the sake of going in a straight line; but if a sense of obligation should come in at all, it would be to prompt him to yield to motives

intrinsically the strongest, and thus to attain a good congruous to the higher part of his nature. If there is no good proposed either for ourselves or for any one else, the act cannot be right.

This point I stated, and in the above terms, in the lectures that I gave here four years since, and it was especially this that was controverted by Dr. McCosh in the correspondence that afterwards took place, and that has been controverted by others. I have now made it as distinct as I can, and leave you to judge.

But what is the idea of right which is held by those who object to that now presented? You will see that I regard right as the quality of action, but they generally present it as an idea of the pure intellect, and that belongs in our scheme, with those of time and space. Hence they say it is something that is eternal and immutable, and to which God himself is subject. Others see that the foundation of morals cannot be in the pure intellect, since anything originating wholly there cannot be a motive, and they say that there is no such thing as right or wrong except in connection with the Sensibility and the Will. That of course puts it out of all relation to those necessary ideas; and yet, they say that there is no authority of obligation, unless it be based on right. It is indeed possible, since choice is moral action, to carry the word right, up into the region of choice as distinguished from action, and to say of the choice of a higher

good made under a sense of obligation, that it is a right choice, or that it is right to choose the higher good; but here again it is right with reference to the good chosen, and can have moral quality only from the primary obligation based on that. Obligation thus springing as one indivisible product from the action of our whole nature, has no need of anything beyond itself to give it authority. It is the voice of our moral nature speaking to us, and is its own authority.

We say then on this whole subject — 1st. That good is valuable in itself. 2d. That it is, and therefore, a proper motive of choice and of action. 3d. That when a choice must be made between a higher and a lower good, obligation is necessarily affirmed to choose the higher. 4th. That between choosing in accordance with obligation thus affirmed, and ultimate good, there is a sure connection. To doubt this would be atheism, or worse. And 5th. That there can be no harm in knowing these facts, and that it will not lower the tone of action to act in view of them, as well as in accordance with them.

With the idea of obligation, formed as has been stated, the moral being is constituted; he becomes capable of a moral act; that is a free act. It is an act of preference or choice, for where there is no preference or choice there is no morality. The idea of obligation is conditioned on that of a free will, but is not its product. It comes of necessity before choice; and choice made either in

conformity with it, or in opposition to it, is a moral act. But such acts, of one kind and the other, cannot be without the formation of the ideas of —

MERIT AND DEMERIT.

These are virtually contained in the idea of obligation, but cannot be fully realized till after the act. I mention them here because these ideas of obligation and of merit and of demerit, belong to a moral being as such. They would belong to him as existing and acting alone. Moral law is inconceivable without them.

From the ideas of Rights and of Obligation two others must arise. The first is that of

RESPONSIBILITY.

We can be responsible to no one who has not some authority over us. The authority must be a righteous authority, that is, an authority founded on a right; and to any one who has such authority we are responsible. Obligation is not the same as Responsibility. We may be under obligation to aid a poor man, but are not responsible to him. In no proper sense can God be said to be responsible to any one. "He giveth not account of any of his matters."

The second idea is that of

PUNISHMENT.

This arises necessarily on the violation of righteous authority. But here a distinction is to be

made, and is greatly needed, to which our language is not fully accommodated. It is that between the evil that comes from the act itself with no intervention of the will of another, as in remorse, or through natural law, and that which is inflicted by another for the purpose of sustaining righteous authority. We need a word which shall always imply a guilty disregard of authority, and the infliction of evil by the person in whom the authority resides for the purpose of maintaining that authority. This distinction is partially recognized in the different uses made of the words penalty and punishment; penalty often implying evil irrespective of guilt, or of the will of another; whereas punishment uniformly implies guilt, and generally evil inflicted by another. When we act in view of penalty as distinguished from punishment, we act under moral law, can be governed only by reason, and may have a philosophy. When we act in view of punishment as distinguished from penalty, we act under positive law; can be governed rationally only through faith; and can have no philosophy. Obedience must be implicit. It may be rational through faith, but as obedience, it does not admit of philosophy. Philosophy may show that the thing commanded is righteous, or in accordance with rights, but this is not supposed to be seen by him to whom the command is addressed, or if it be, the additional motive involved in the command may be needed.

What next? There are those, and their number is increasing, who say that the idea of God is given in the same way as those we have been considering. To decide this we must know what they who say this would include in the idea of God. Would they include the idea of an Infinite Personal Being possessed of moral attributes? Without this the idea of God is not worth contending for. But if they would include this, I do not think that the idea is thus given. If so no man could be an atheist. On this point, however, I would not be confident.

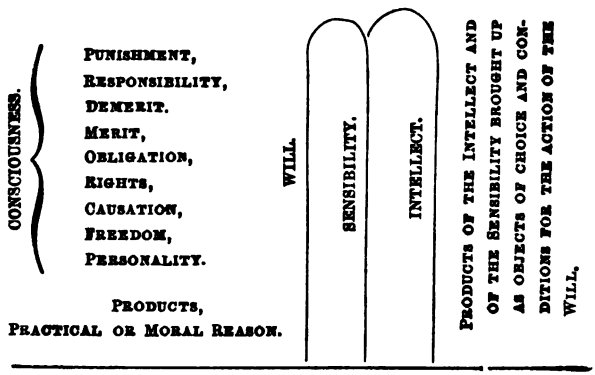
We have now found the ideas which would be necessitated by the addition of a rational and free Will to the Intellect and the Sensibility. What shall we call the power by which these ideas are given? They are given in the same way as the necessary ideas from the Intellect alone, which we have attributed to the Reason; and as those from the Intellect and Sensibility, which we have attributed to the Æsthetic, or Affective Reason. Evidently the power here is of the same general nature, and I suppose it to be what Kant called

THE MORAL, OR PRACTICAL REASON.

If we call it the Practical Reason, we indicate all the functions of the power, especially that characteristic of its products which makes them both rational and emotive. If we call it The Mora.

Reason, we name it, as in the case of the Æsthetic Reason, from only a single one, though the principal one of its functions.

It only remains to place before you in a single view the results we have reached in this lecture.[1]



INTELLECT, SENSIBILITY, AND WILL

[1] See Appendix C.

LECTURE XI.

BODY; SOUL; SPIRIT. — SPONTANEITY; FREEDOM. — THE NATURAL; SUPERNATURAL; MIRACULOUS. — CONDUCT; OBLIGATION; A SUPREME END; CHARACTER. — THE HIGHEST GOOD; THE WHOLE GOOD; THE LAW OF LIMITATION.

We have now constituted the Person. In doing this we have found that those necessary ideas or products which are common to the race, and which are regulative, are of three kinds. The first and lowest are those of the pure Intellect. The second are those of the Intellect combined with the Sensibility; and the third are those of the Intellect and Sensibility in combination with a rational Will.

And as these three products have a different origin, so they have different characteristics and perform different offices. They are alike as necessitated, and common to all, and regulative; but they contain different elements, and regulate different departments. By the addition of the Sensibility to the Intellect we have a new department for the Intellect. The Intellect gives us light simply; what has sometimes been called a "dry light." With the Sensibility added, we have light and

warmth blended, and a field for the Intellect that covers the whole range of possible combinations of intellect and feeling where no conscious will or purpose is involved. With the Will added we have not only light and warmth, but the chemical rays. The action of Will not only opens new fields to the Intellect, but gives new materials and forms to the Sensibility. It is here, and here only, that we find anything of a moral character.

From what has now been said it will be seen that we have three departments of study in accordance with the three classes of regulative ideas. We have the department of pure thought; the department of animal wants and desires, and affections, and of beauty; and the department of morals; and we see that these departments must become more complex and difficult as we go up. We may see too, one great source of the disagreement of those who have labored in the higher departments. It has been because they have not sufficiently apprehended the essential differences between the regulative ideas in the different departments, for these are scarcely more distinguished by their subjects than by the regulative ideas that underlie them. With these differences in view it does not seem possible that an attempt would have been made to found the science of morals on an idea having a similar origin with that of space.

In thus reaching a person, we make, as has been said, a great transition. We reach the highest

possible point; we reach an intelligent, free, moral cause. We reach a *cause*. Here is a being capable of interposing his own free choice and his power of volition, and thus purposely causing that to be, which, but for him, would not have been. Herein, as respects freedom and power, he is in the image of God. Now we have, as we had not before, a being capable of character, of being loved, respected, venerated, rewarded; capable also of being despised, contemned, abhorred, punished. You may discipline an animal, you may train him, but in no proper sense can he be said to have guilt, and therefore he cannot be punished.

In reaching personality after the method we have followed, we find below that, three forms of necessitated activity. The first is that of external nature, with which we have, at present, nothing to do. The second is that by which the bodily functions are carried on. It comprises all the movements within that part of our scheme which was presented under the head of Physiology, which are attributed to life, and seem automatic or spontaneous. The third comprises all the mental movements, intellectual and affective, up to the point of choice. There is also, as we shall see, a fourth region of necessity, comprising the results subsequent to choice and consequent upon it. Of these regions of necessity, three pertain to us in such a way as to give us three different na-

tures, for, as I use the term, wherever we have a uniform necessity that can be distinguished from all others, we have a nature.

We have then first, the physical nature, or the body. It is a living organized body, and, the conditions being given, the processes within it by which it is built up and sustained, as of digestion, circulation, and secretion, go on by a movement as spontaneous, as necessary, as little connected with our choice or volition, as the processes within the vegetable. These processes are, indeed, carried on by that organic life that is common to the vegetable and the animal, and the necessity which controls them may be called an organic necessity, as that which controls mere matter may be called a physical necessity. The body, then, will not consist merely of the matter of which it may be composed at any given moment, and which is constantly changing, but of that in connection with the organific power that has been in it from the first, has wrought its changes, has caused it to be such a body rather than another, and given it its identity, so that we say we have the same body, while not a particle of the same matter remains. How far this individualized force may be preserved in its identity when it is separated from the matter of the body so that it may again reappear, perhaps, according to the doctrine of the correlation of forces, under some other form, it is not for us to say. Certainly it is not the least marvelous feature of our present

state that there are types that are constantly preserved, while yet having such a wonderful variety under them. And as the types are preserved, so there is no absurdity in supposing that in some way unknown to us, each individual force, that which is really the body, may be preserved. The preservation of the type by generation after its kind seems natural because we are accustomed to it, but is really as mysterious as would be the continuity of the individual force. At any rate we have here a separate, necessitated form of movement, that builds up and maintains organization, and we call the force thus building, together with the resulting organization, the Body.

Then we have the mental necessity that determines the movements of the mind up to the point of choice. We do not think, we did not originally, from will. If we had not thought first by a necessity of our nature, and because we were created thinking beings, we could never have known that we had the power to think. The power is necessitated, the direction is from will. Of this involuntary movement of the mind whose products are offered to us to be accepted or rejected, I have already spoken. Left to itself it is a movement according to a necessary law, thus implying a nature. The laws of logic are as necessary, to say the least, as that of gravitation. So, also, in the laws of the Sensibility, when the conditions are given; and in the various combinations of Intellect

and feeling, including animal wants and passions. The force which produces these necessitated movements, is other than that which builds up the physical organization. With modifications it is common to all sensitive and perceptive life, to the animals as well as to us, and, though the word has often a different and higher meaning, may be called the Soul.

There remains that which I have represented as standing above the products of this necessity and choosing and refusing, and as exerting in various ways an indirect control over the products themselves. This again is a force other than either of those below it. So far as it is free, that is, as it chooses with an alternative different in kind, and as it is intelligently causative, it is not a nature. It is another order of being. It is Spirit. The functions of Spirit are two. They are first, Freedom of choice, and second, Causation. By freedom we mean the power and the opportunity of choice by a rational being with an alternative in kind. This idea of freedom so inheres in such a power that the power is inconceivable without it. By causation we mean nothing secondary. We mean the origination both of choice and of motion. If man is not a true cause he cannot be responsible. In these man has not a nature, but is supernatural. But subsequent to choice there is necessity, and so a nature; and this necessity is as absolute, at least for us, as any other. A man

may choose whether he will steal or not, but if he steal there will be a necessary reaction on his own spirit that will render it different in spite of will, from what it would have been. Remorse and shame will come by necessity after choice, when, by a similar necessity, there might have been a virtuous self-complacency, and hope and joy.

The necessity of which I have just spoken is one part of the moral nature, for it will be seen that, as related to the spirit, the moral nature is double. It consists in the necessity which gives us the idea of obligation before choosing; and also in that which gives us the results just mentioned that follow choice, and action from it. If we were not under the necessity of feeling obligation, we should not have a moral nature; and if there were not necessary results as we act in accordance with, or in opposition to obligation, that nature would be nugatory. We should not be a law unto ourselves. It is to be observed, however, that while obligation precedes the action of spirit as moral, yet that the idea of it is conditioned on the existence of Spirit, and the possibility of its acting, as the idea of remorse is conditioned on its having acted in a particular way. We have thus here also the circle that we find in all life, for in every living thing all that is essential to the whole is implied in the action of every part.

We find then, in working our way up, a clear distinction between the action of Spirit as free and

causative, and all necessity of nature. We also find three departments of force clearly distinguishable from each other, and suppose that the Apostle Paul was justified as a philosopher in calling them Body, Soul, and Spirit. Certainly man is more complex in his unity than any other being on the earth; perhaps more so than any other being in the universe, unless it be God himself; certainly there are in him the three distinguishable and separable forms of activity mentioned — separable because actually separated in the vegetable and the animal, and each fairly referable to a distinct force; and for each of these we need a name. To the names given there are objections; and especially to the term "soul," as having often, in our times, a broader meaning; but I suppose this distinction is indicated by the Apostle in his use of these terms, and it is, perhaps, as well as we can do.

Having now reached the point of freedom, and having spoken of spontaneous movement in connection with that, I will call your attention to the difference between them. As related to our wills, a spontaneous movement is as necessary as any other. It differs from other necessitated movement in springing from within that which is moved, and so simulates freedom. As apparently without effort it is pleasing, and as from a concealed cause it is mysterious, but that it is the opposite of the will and of action from that is clear

because it is the spontaneous movements that the will is to oppose and rule over. Sudden anger is spontaneous; so are the Appetites, the Impulses, and the Passions generally, and these are to be controlled by the Will. In that is choice, and also purpose, which is generic choice. These are made, or should be, in the light of the Intellect, in view of reasons standing before, as well as from impulsions, and in these alone is there freedom. Spontaneity and freedom are therefore entirely different things. This I speak of with some emphasis because the two have often been confounded, and sometimes by eminent writers.

The point of freedom which we have now reached is the point of Dominion. Of this I have before spoken as a characteristic of man. Dominion implies intelligent freedom, because that which is dominated over, or determined by anything else, cannot have dominion. This prerogative of freedom is one of the original and simple forms in which our nature manifests itself, and so admits of no explanation. It must be known directly by and in itself, or it cannot be known at all. In this way all men do know it. The power of choice and so the idea of freedom, enters into their conception of themselves in the same way that the power of thinking does. We can choose as we please. Here our power is direct, and nothing that does not destroy our very being can take it

from us, or prevent our using it. In outward acts we use means. We need at least the use of our limbs and organs of expression. But in choosing, the act is simple. We use no means, and no one can teach us how to do it. There is no *how* to it, for a *how* always implies the use of means. Hence, as independent of external force, and of means, which may, or may not be in our power; as the origin of all outward manifestation of what is properly the person, and as rendering character possible, the Will as choice is the ultimate seat of responsibility, and an essential element of personality.

This direct power over our own choices by which we become capable of dominion, ought to be distinguished more carefully than it has been from that secondary power of volition which is put forth only in the use of means. Choice may be without volition, and expresses character as fully as if volition followed. Hence it is that God looks upon the heart.

But volition without choice is impossible, and when it is put forth may be nugatory. It has no moral character, and its value depends on that contingent power through which we control our bodies and the agencies around us. It is through this that we control indirectly the involuntary processes within us, both physical and mental, and also the processes of nature around us. Choosing first, and then controlling these with reference to ends, we have dominion.

And here I think we are at a point where we may see the difference between what is natural and what is supernatural. Nature is the region of necessity. Left to themselves the processes around us go on with absolute uniformity. So the rivers run, so the stars move. But that which is free, and has dominion over nature, is *super* natural. It is above nature. It is in another region and is controlled by other principles altogether. There are those who say that everything out of God is nature, but this has been unfortunate as confounding things that differ, as favoring necessity, and tending to degrade man. I would say that everything that is not God, and that is not made in the image of God, is nature. If that which is in God be not nature, if it be supernatural, why should we call that in us by which we are in the image of God, nature? If there be, as is conceded, that in the kind of powers with which we are endowed in virtue of which we are in the image of God, and exercise dominion over nature, then we must be, so far forth, supernatural. And here I suppose we find the true line between nature and the supernatural. All spirit and spiritual activity, whether it be morally good or evil, is supernatural. All free causation is supernatural.

There is another point that may be referred to in connection with the power of Will. It is the

difference between the supernatural and the miraculous. Much is said at present in regard to miracles, and men seem to me to fall into difficulties about them of their own making. Did you ever see a man riding in his own dust? In California, where they have no rain for three months and the wind blows steadily in one direction, a man may ride thus all day with everything obscured around and above him, while, to one who stands apart, the atmosphere is wonderfully transparent. We have speculative men much in that condition. On many points, and this of miracles is one, they raise a fog about their own heads and suppose it extends through the universe. They talk about miracles as a violation of the laws of nature. A miracle is no violation of any law of nature. It presupposes laws of nature, and is simply an act performed directly by the will of God that transcends those laws. That the will of God should cause iron to rise and swim in the water, is no more a violation of the law of gravitation than it is for me to raise this rod which goes up directly or indirectly by the superior force of Will acting at some point immediately upon matter. The law of gravitation continues to act, but the rod rises by a spiritual force that transcends it, that force acting freely, intelligently, and with dominion. Such an event, so far as it is produced by an agency that is spiritual and free, is supernatural, but not miraculous. In a miracle the will of

God acts directly, and produces outward effects with no intervening agency. This our wills cannot do. Hence a miracle is the great seal of God to any communication from Himself, and, so far as we can see, not the only possible evidence, far from it, but the only possible seal. There is in it, as there is in our control over nature, the agency of an intelligent Will exercising dominion. This is the important element, and the only important element in both cases. The one is no more strange than the other; there is in it no more any violation of a law of nature, but the mode is such as to show that it can be done by God only. What difficulty then is there here? I see none, unless we deny the power of God to act directly on matter, and to do that would be a practical denial of his existence.

We have now seen how personality is constituted, and what are its prerogatives; and we have fully furnished the mind up to the point of responsible action, giving it its three classes of regulative ideas, together with all that comes contingently by direct presentation. Some, indeed, may think we have gone beyond that, for in the list I gave you at the close of the last lecture the ideas of merit and demerit, and of reward and punishment, were put down, and they may be thought of as solely the result of moral action. In a sense they are, but they are so implied in the very

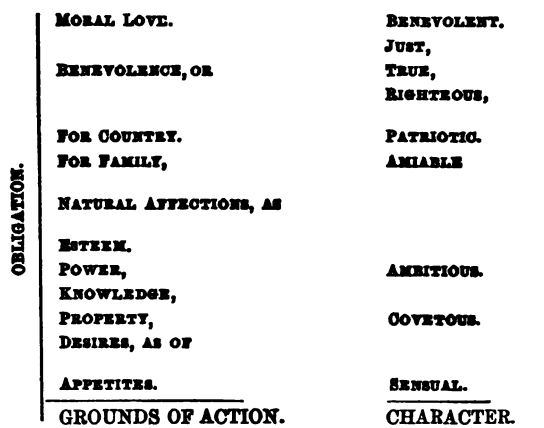
conception of a moral nature, are so inherent and essential that they may be said to be given with the nature itself.

Having reached the person, as we now have, and thus a proper cause, we have reached the highest point. There is nothing higher in kind than a personal cause. God is such a cause. Henceforth there will be no more upbuilding by the addition of conditioning and conditioned faculties. We now enter another region. We pass from the tree to its fruit, from the philosophy of man to that of conduct, from the upbuilding of the person to the formation and upbuilding of such a character as a person thus constituted ought to form and build up.

But moral and responsible action, to which we now come, is action from choice, or rather, it is the choice itself. A being with no power of choice can be neither moral nor responsible, and when the choice is made the moral character of the act and of all that pertains to it is determined. Choice implies an object that may be chosen, and also an alternative. This alternative may be between two objects of the same kind, or of different kinds, or it may be between choosing a single object or not choosing it; but an alternative of some kind there must be.

Let us then bring up before the person the different springs or grounds of action which we have found in the constitution, and so the different

possible objects of choice. To do this let the person, now fully constituted, but not having yet acted, be represented by a straight line thus, —



We then bring up, as we have heretofore done, the results of our previous work, and place them before the person in their order and rank as conditioning and conditioned. Without going into detail we have thus, in kind, every principle of action in our constitution, each legitimate and desirable in its place. We then place Obligation on the other side of the line, written so as to show its presence at every point where choice is to be made between different principles of action that may be contending for the ascendency.

With this before us we are able to see what takes place in responsible action. A choice is to

be made between a lower principle of action and a higher, and the moral nature, when it is dealt fairly by, will always affirm obligation to choose the higher. If the question be between the gratification of appetite and the practical exercise of a benevolent affection, obligation will be affirmed to exercise the affection. This affirmation is not an act of the will. It is not virtue, or any part of it. It is necessitated as being nature, and if it were not thus necessitated we should not have a moral nature. The sense of obligation thus stands by itself in our constitution. We do not suppose there is anything like it in that of the brute. In that the strongest principle prevails with no intervention of any sense or idea of obligation. If the nature of the brute were represented by a straight line, as I have represented the person, it would be governed wholly by what is in front of it. Nothing would be thrown back. With us the proper motives to choice are the objects that address the different principles of action; or, if you please, those principles themselves prompting us to act in view of the objects. The objects present themselves as good; if not they would not be motives. The principles of action promise us *a* good if we will permit them to act, and, in view of the objects and of the affirmation of obligation taken together, *we* are to choose which object we will have, what principle of action we will adopt, what end we will pur-

sue. The obligation is not an independent motive, and becomes possible only as there is such a motive presented to the Sensibility as a good, and that is higher than some other with which it is in conflict. There can no more be an obligation independent of some good in a sensibility than there can be a right thus independent.

It will be seen, then, that obligation acts from behind as an impulse, and is to a moral being what instinct is to an animal, except as any impulsive power, however high, must be modified by the coming in of comprehension and of freedom. These come in to comprehend it and the conditions on which it acts, and to prevent our being misled by it as we are liable to be, and as animals are, and must be, liable to be misled by their instincts. The differences between Obligation and Instinct are two, one from its connection with comprehension, and the other with freedom. By comprehension we can understand its office as we can that of an ordinary instinct, can find the conditions on which it acts, can compare it with other impulsions which come without comprehension, and also with the reasons that stand before us and become motives only through the intelligence. It is through this power of comprehension that a philosophy is possible. Obligation differs in its action from instinct, through freedom, because, though it claims to be, and was intended to be a guide, — a voice behind us saying "this is the

way, walk ye in it," — there is yet that in the personality so above it that it can be rejected. The *man* has the power to set it aside, and not only that, but to set aside the reasons that are set before him, — all that good with which our whole nature leads us to suppose that obligation will ultimately coincide, — and to run into folly and wickedness. This it is to be a fool, which, as I have said before, no brute is capable of being. With this impulsion, and power of comprehension, and freedom, man can act rationally and morally from a sense of obligation alone, with no visible reason in front, but with the faith that there is one. He can also act rationally and morally in view of the good itself without being aware of the impulsion or thinking of the obligation; or he may act under the conscious guidance and inspiration of both.

At this point it is that we may see how it is that obligation as authoritative may be reconciled with freedom. Authority is either mandatory or permissive. Sometimes the parent says, "thou shalt," and perhaps the command is felt as onerous, though never if filial love be what it should. But sometimes the child says, "May I?" and if the parent says, "Yes," he is acting under authority no less than if the thing were positively commanded. In this way, through filial love when the command is positive, and through permission when authority and inclination coincide, authority is

harmonized with an obedience that is freedom. For the most part we act under the guidance of authority as permissive, and, if we are in the right path, shall do so more and more.

Obligation, as has been said, is affirmed whenever there is a conflict of motives as higher and lower, but we can never estimate its full force, or see how character is formed without referring to a distinction I formerly made in this place between ends as subordinate, ultimate, and supreme. A subordinate end is that which we seek for the sake of something else. An ultimate end is that which we seek for its own sake as a good in itself. A supreme end is an ultimate end made by us paramount to all others. Setting now before a person the range of motives or ends involved in the column I have placed before you, it might be supposed that he might act, now with reference to one end, and now to another, without making any one supreme. And many seem to do this. They seem to be controlled, now by this impulse, now by that, and to be under the guidance of no one principle. We call them frivolous. If, moreover, you ask the first man you meet what his supreme end is, the chances are he will not be able to tell you. But men often have such an end without stating it to themselves or revealing it to others, till they are tested. Here is a man with whom power is a supreme end. He is full of good impulses, ready to do you a favor, cares

nothing for money; but come between him and his power, and that man is a Bonaparte, and will sacrifice the lives of five hundred thousand men to enable him to take the city of Moscow, while professing, and perhaps making himself believe, that he is acting for the good of his country. And so it is that some ruling passion is constantly revealing itself in society in such results, that, if they had been foretold, the man himself would have said, "What! is thy servant a dog that he should do this thing?" It does not follow, therefore, because a man cannot state to others, and perhaps does not even to himself, what his supreme end is, that he has none. Indeed, it seems to belong to the very nature of a moral being that he should have such an end, for, as the gradation of ends goes on till you come to the highest, Obligation utters its voice at every step, so that, if, at any point lower than the highest, a stand is made, the end chosen at that point becomes the supreme end; whereas, if the man goes up, as he should, till he reaches the highest end and chooses that, then that will be the supreme end. It enters therefore into the very conception of moral law that there should be a supreme end, and that the law should require that that end be chosen.

We now see how it is that character is formed. It is formed by the choice as supreme of some one of the ends presented in the column of motives or

principles of action, the character being determined by the end chosen. He who chooses money as his supreme end, is a covetous man and "an idolater." He who chooses power is ambitious; and he who chooses God and his service is religious. This divides characters into two classes. It makes a difference to the man himself and to others in many ways whether he chooses appetite, or property, or knowledge, or power as his supreme end, but in one respect those choosing either are morally much alike. They all equally ignore Obligation. Whoever is governed by a sense of obligation can make no end supreme that is not the highest, and he who fails to be governed by a sense of obligation must be radically wrong. If the proper test of morality be that a man shall be governed by his rational and moral nature — and what else can it be? — he is not a moral man. Between those who choose their ends and seek them with the full purpose of doing it in accordance with obligation, and those who either count obligation out altogether, or only give it its turn with other impulses as they may happen to come up, there is a radical difference. Every variety of character there may be among those who choose any end beneath the highest. They may even seem to have no character at all, but they lack equally the voluntary element of a true manhood, which consists in always choosing a higher end when it comes into competition with a lower, and

in making the highest end supreme, so that life will be at any time sacrificed rather than relinquish it.

And this shows us what it is for a being to fall morally. It is to relinquish the choice of that which is highest for the sake of an inferior good, and to make that supreme. It shows too what is meant in the Scriptures by "the flesh," and "the spirit," when they are said to be "contrary one to the other." The whole life of him who abides steadfast in the choice of that which is highest is opposed in its spirit to that of him who adopts as supreme any inferior end; and he who has once fallen and would regain his standing must maintain a constant struggle.

The evils from a failure to choose the highest end are inherent, and are of two kinds. They are, first, from the want of congruity between the end chosen and our nature. There must be that which is to our nature as God made it, what light is to the eye, or air to the lungs; and unless we find that, whatever it be, there will be unrest. There can be no true success. There will also be evil from the want of harmony within the man himself. No man can fail to choose the highest end known to him, or that may be known, without rebelling against his better nature and subjecting himself to self-reproach. The particular passion may be gratified, but the moral nature is outraged, and the man must either suffer from it

continually, or quiet it temporarily in some disingenuous way. It is this last that most men do. There are more men who practice dishonesty upon themselves than upon others.

It will follow, from the column of ends presented, that there is a difference not only in the quantity of the good to be derived from the action of the faculties in correspondence with their ends, but also in the quality. This is an important point in morals. Every principle of action has connected with it its own sensibility that differs in quality from every other. Especially is this true of the moral nature as we require the faculties to act in harmony with that, or in opposition to it. The deepest harmony of our being is that of the Will with the Moral Nature; the most fearful discord is their opposition. From these we have a quality of enjoyment and of suffering wholly different from any other, and through which we are able to enter into sympathy with the enjoyments and sufferings of the highest order of beings.

Understanding as we now do, what the principles of action are, and how character is formed, we are prepared to see three things. And the first is, what the highest good of man will be. It will be the result of the choice by him of the highest end, and of an adherence to that under all possible conditions. He is to choose it both as congruous to his nature, and as required by obli-

gation; and if choice under such conditions will not secure the highest good, then our constitution is untrue to itself, and the government of the universe is not moral. This end differs from all others in one thing, and in thus differing puts all men on an essential equality. He who chooses money or fame must work for them, but he who chooses God and his service, by the very act of choice so enters into that which he chooses and takes possession of it that nothing can deprive him of it but his own falling away from the act of choice.

The second thing we are prepared to see is, what the whole good of man will be. The whole good will be from the conspiring forces of his whole nature acting in harmony. The highest good is independent of all that is below it. It may belong to the martyr at the stake. But every principle of action and every susceptibility of our nature is legitimate and good in its place. From the action of every one there results a good, and no good is to be rejected unless it comes to be relatively, and in its time and place, an evil. "Every creature of God is good, and nothing to be refused, if it be received with thanksgiving." The whole good of man will then consist in all the good, of whatever quality, that can be derived from all the susceptibilities and powers acting harmoniously.

The third thing we are prepared to see is the

mode in which this good is to be attained. This is by acting in accordance with what I have heretofore explained in this place as the Law of Limitation. This grows immediately out of the Law of the Conditioning and the Conditioned, and is simply an application to human life, bringing unity into that, of the principle by which God secures unity in the action of the several forces by which the processes of nature are carried on. Throughout the range of forces and faculties that have been presented to you, you have seen that they have to each other the relation of Conditioning and Conditioned by which they are higher and lower; and now it is to be noticed that the relative force of the lower is always precisely that which is requisite for the best operation of that which is higher. Vegetable life, for instance, being what it is, the force of cohesion and of chemical affinity are just what they should be to enable the roots to penetrate the earth and to separate the needed elements. This is the law of the forces throughout, and gives us at once the law of limitation in regard to conduct. As the faculties and motive principles are higher or lower, so are the duties, the pleasures, the satisfactions connected with them. How far then may we go under any particular principle, as the love of property? Just so far as will best promote the action of the principles above it. So of the appetites, and all the others. Eat as much as you will, if eating up to that point will best

promote the action of faculties above appetite. Follow the fashions, attend parties, balls, theatres as you choose, provided you do nothing to repress or limit your better nature and the power of God's Spirit within you. "We are called unto liberty." We have here, not a rule, but a principle. God does not govern man by rules. He never meant to. He would have them govern their faculties and principles of action, so liable to become a mob, and to bring unity and harmony into them on the same principle on which He governs his universe and brings unity and harmony into that.

We thus know through the law of the conditioning and the conditioned what is lower and what is higher, and so what is highest. We know therefore through this what the highest good of man is, and, as we have seen, it is to be attained simply by choosing it. Knowing thus the place of each faculty and principle, we know by the Law of Limitation how to hold it in its place and to make it work there; and therefore we know through that what the whole good of man is and how to attain it.

If the inquiry be made, as it will be, how those who know nothing of the Law of Limitation can regulate their conduct by it, it may be replied that this is only what takes place in other cases. To all fundamental laws involved in our nature mankind conform themselves in some measure, instinctively. They were under the law of gravi-

tation, and regulated their movements by it before that law was discovered, but had no philosophy of those movements. In the same way they conform to the laws of health and of taste by what may be called physical and rational instincts till, at length, underlying principles are discovered, and then philosophy comes in, enabling them to comprehend processes, and give reasons, and apply tests as they could not otherwise. To some extent there is, no doubt, an immediate and direct apprehension of what is higher and lower in motive and in conduct, and of obligation as consequent upon that, but that does not give us a philosophy. To make progress, here, as elsewhere, we must reach comprehension, and law, and underlying reasons where there had seemed to be mere fortuity, or caprice, or impulse, or instinct.

LECTURE XII.

ORIGINAL OBJECTS. — ACTION AND ITS CONSEQUENCES. — PHILOSOPHY OF ACTION FROM THE CONSTITUTION. — NO CHRISTIAN MORAL PHILOSOPHY. — CHOICE. — SUPREME ENDS. — SUPREME PRINCIPLE OF ACTION. — CONSCIENCE. — A NATURE AND A NECESSITY AFTER CHOICE. — MORAL AFFECTIONS. — MORAL EMOTIONS. — RELIGIOUS EMOTIONS. — THE LAW OF CONSTRUCTION. — THE LAW OF CONDUCT. — TEST OF PROGRESS. — POSITION OF MAN AS A WORSHIPPER.

At the commencement of these lectures I said I had three objects in view. One was to present man in his unity. Another, and a principal object, was to try the experiment of popularizing, in some measure, metaphysical subjects by means of the blackboard. The third was to present some views of my own, perhaps worthy of attention.

The first of these objects, the presentation of man in his unity, I hope to accomplish before closing this lecture. We have brought him up to the point of choice. The choice itself and its results remain to be considered.

In regard to the second object, I am encouraged. So far as I know it is the first attempt to instruct a popular audience on metaphysical subjects through the eye, and from the attention given, and from remarks that I hear, I cannot help thinking that in the hands of one practiced and skillful in its use, the method might be of essential aid. Following the clew given by the law of the Conditioning and the Conditioned, without which these lectures could not have been given in this form, what might otherwise seem complex becomes simple. To one viewing the array before you for the first time it must seem complex, but how simple it is. We have, as you see, a perfect series of related forces and products, from gravitation up. The forces and products themselves cannot be presented to the eye, but their relations can, and by presenting them thus those relations are more clearly apprehended, the attention is held, and the memory is aided.

As to any views of my own, my wish has been, and will be, to present them fairly, and to have them stand on their own merits.

It remains to us, as I have said, to speak of action and its consequences. We have constituted the person, and seen his prerogatives. Now he is to act. But action morally is choice. In that alone is freedom. We are therefore to consider that. The choice must lie between different ends as presented in the last lecture, but in making it

we have first to consider whether we will take obligation into the account or not. If we do that fully and fairly it is impossible for us to choose as our supreme end any but the highest, or what we suppose to be so. Hence the necessity of a supreme end in a system of morals, and the impossibility of reaching the full import of obligation, and so of moral law, till we reach that. The point where the highest good is apprehended is the Sinai whence the moral law proceeds. Obligation accepted will continue to assert itself all the way up, and unless the highest end be chosen there can be no peace. There must be either criminal stupidity or intestine war. "There is no peace, saith my God, to the wicked."

If obligation be accepted and the highest end be chosen, then we have nothing to do but to let the other principles of action take their places and act variously with varying conditions under the law of limitation. If obligation be not accepted, if we ignore or neglect that peculiar part of our nature which lies back of the line and prompts from behind, then we are to make our choice along the whole line below the highest. Doing this we may seem, but only seem to be afloat, and to have no fixed character; or we may choose definitely some lower principle and act with energy under it. Doing this last the law of limitation for the other principles of action including obligation, which never can properly come under

that law, will have a false standard. It will have the principle or end chosen as supreme as its standard, and all other principles and ends will be subordinated with reference to that.

If I have stated rightly what the powers of man are and their relation to each other, there must be some object of choice or end that it would be according to his whole nature to choose as supreme. Not properly, or in the highest sense, is that natural, though often so called, which is demanded by some one natural principle of action that would overstep its limits; but that which is demanded by the whole constitution when the powers act in harmony. Rising, as these powers and principles of action do, one above another, and Obligation constantly demanding, when they conflict, that the highest shall prevail, it must be according to the whole nature that the highest end, whatever that may be, shall be chosen as supreme. As thus put, it is self evident that what is natural, and what is obligatory, that is, what ought to be done, must coincide. Indeed, obligation, as necessarily affirmed, comes in as a part of nature, and a part too which a comprehensive wisdom can least afford to disregard. There must, therefore, be a coincidence of nature, and obligation, and wisdom, in demanding the choice of the highest end. The choice itself is a spiritual and free act, above and outside of nature, and may, therefore, be unnatural, and wrong, and fool-

ish. It lies in a region where wisdom and folly, holiness and sin are possible, and where we find laws and results impossible in the region of matter and of necessity.

It is because all normal conduct must thus grow out of the constitution, that a philosophy of conduct, or a Moral Philosophy, is possible. This philosophy will consist in such a knowledge of the constitution of man as God made it, and of the possible objects of choice, as will enable him who has it to say what the supreme end or object of choice should be, and to adjust the whole range of active principles according to the law and end of the being regarded as a whole. To be philosophical, rules for the use of the eye must be derived from a knowledge of its structure and end; and so of man as a whole. There can be no philosophy of conduct for him that is not derived from a knowledge of his constitution and end. Hence it is only in a modified sense that there can be such a thing as a Christian Moral Philosophy. In strictness there is no such thing. So far as man is now a ruin there can be no knowledge of what his restoration would be, nor any philosophy of the mode of it, except through a knowledge of what the constitution originally was, and ought to be. So far as Christianity is a revelation it is not science. It is to be simply interpreted, and accepted. So far as men are governed authoritatively by the precepts of Christianity there is no philos-

ophy. Obedience is either slavish, or from faith. So far as Christianity requires special duties they must be duties demanded by a right adjustment of our powers in the new relations in which Christianity places us. If Christianity be not fundamentally in accord with our original constitution, and will not restore man to a true manhood, and the highest manhood, we cannot accept it. Hence a true moral science will, and must be, independent of revelation, and will be a test of anything claiming to be that, for nothing that can be shown to be really in opposition, either to the reason or to the moral nature of man, can be from God. Say if you please, that on this ground man is incapable of constructing a moral science. Be it so. The past would almost seem to justify the assertion. Still, we are not required to call that science which is not science, but is either impulse or instinct, or faith. Certainly philosophy is for the maturity of the race. Certainly human life, not the life of children only, but of men, and of the most enlightened men, ought to be largely controlled by authority and by faith. It befits our condition, and there is no more natural or ennobling principle of action than faith.

Passing now as was proposed, to Choice and its results, the question is what supreme end we shall choose. To this different answers are given and earnestly contended for, though often meaning

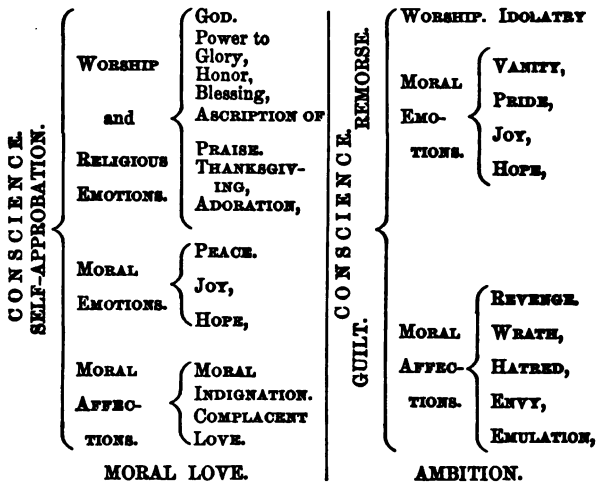
the same thing. One says perfection is the thing to be chosen. In this he includes, no doubt, that result in the sensibility which comes from perfection, for mere perfection of being or of adjustment without activity or results can avail nothing. An other says that virtue is to be chosen. It is to be chosen for itself, and has in it its own reward. Being itself an act of choice, and wholly in the will, it is not easy to see how virtue can be chosen as a supreme end, or an end at all; but the thing primarily regarded here is right activity, the state and results being taken for granted. When those holding this speak, as they constantly do and must, of virtue as its own reward, they mean by reward a result in the sensibility wholly different from the virtue itself. Another says that the thing to be really chosen and valued for ourselves and others, is the satisfaction resulting from perfection and from virtuous activity, and which can be had in no other way. He says that a rational being comprehending his own capacities and the capacities of others would choose as his end the highest good of all beings capable of good. Here the result is primarily regarded, taking for granted the state and the activity.

But that these persons mean the same thing, will be more evident, if, instead of inquiring what we are to choose as an end, we inquire what principle of action we are to make supreme. Those making the same principle of action supreme will

have the same radical character, will really choose the same supreme end, and it is a pity they should dispute about words. But in regard to this there is substantial agreement, at least among those claiming to be christians. They agree that the principle that should be made supreme is Love. But what is this? Here men differ. I suppose it is rational and moral love, and by this I mean more than sentiment, or emotion, or affinity, or than choice from these. It is to be distinguished from the natural affections that come before choice, and from complacent love that comes after it. It is not, as so many suppose, benevolence as a sentiment, but as an act of choice and of will. Central to it is a rational choice of the good of those loved for its own sake, and those loved must include not only those attractive to us and in whom we can feel complacency, but the debased, and evil and unthankful, and those manifesting personal enmity. In short, it must be a love like that of God in giving his Son for us; like that of the Son in dying for us, and in praying for his murderers on the cross. This love of God for men was a holy love, but in it he sought their good, and not the doing of right for the sake of the right.

Since, then, men are so much better agreed about the principle of action that should be supreme than about the end, though they really amount to the same thing, we will start from that; and if we would represent to the eye the different results,

as we choose the highest as supreme or one that is lower, we must make two columns. To do this we recur to the column of possible principles of action presented in the last lecture, any one of which may be made supreme, and construct the columns thus, making Moral Love supreme in the one column, and Ambition in the other.



You will see that I have placed conscience alongside of this whole movement, as pertaining to it all. Hitherto I have not spoken of Conscience, because, as I understand it, it does not appear except in connection with our own moral choices. Having a moral nature we might judge correctly of the moral conduct of others, but that would not be

conscience. Conscience is our moral consciousness in connection with our own choices — not our outward acts, but our choices. It is at work previous to choice affirming obligation to choose in accordance with that which is highest; and after choice it gives us, in connection with the ideas of merit and demerit, the feelings of self-approbation, and of guilt and remorse. Like consciousness it is a *knowing with.* We know our choices, and together with the knowledge of them we have through Conscience, a knowledge of their moral quality, and so a judgment concerning them. It is therefore strictly personal, and resembles the tribunal of God in judging of choices and motives. Its precise nature and office are given by the Apostle Paul when he says, "For when the Gentiles which have not the law do by nature the things contained in the law, these having not the law, are a law unto themselves. Which show the work of the law written in their hearts, their conscience also *bearing witness, and their thoughts the meanwhile accusing or else excusing one another.*" Here we see that the law is one thing and the conscience another. But the law is a law within us by which we become a law to ourselves, and what can that be but the moral nature, as I have said, affirming obligation and enabling us to judge generally of moral subjects, while, in its relations to us personally and when we come to act, this same moral nature becomes conscience, and

bears witness to the moral quality of our choices, and either accuses or excuses us for what we do. The acts are done by the man, the "bearing witness," and the "accusing" and "excusing," are done by the conscience.

We know our choices, and also whether they are or are not in accordance with what we believe obligation requires. It is to this last, that conscience "witnesses," and then either excuses or accuses us. This makes the office of conscience wholly different from that assigned it by Mr. Martineau. He says that "when the whole series of springs of action has been experienced, the feeling or 'knowledge with ourselves,' of their relative rank constitutes the individual conscience."[1] But this seems to me merely preliminary, and not the action of conscience at all. Let a man judge as he may of the springs of action, there is no "accusing" or "excusing" connected with it. He judges of them as of other things, and how is he to know if he judges wrongly? But every man must know whether he chooses and acts in accordance with his sense of obligation. Mr. Martineau places the office of Conscience at the point where we judge of springs of action. I place it at the point where we judge of our choices as conformed or not conformed to the demands of obligation. In his view it has nothing to do with the will; in my view it respects the action of the will, and that

[1] *Review of Whewell's Morality*, p. 17.

only. Taking cognizance only of choices and motives, the judgment of conscience has nothing to do with means, or opportunity, or outward failure or success; and if we deal honestly with it, it will accord with, and anticipate the judgment of God.[1]

And not only do we have conscience given in connection with a choice which determines the drift of character, but also Moral Affections. The difference between the Natural and the Moral Affections is, that the Natural Affections spring up before choice, and so independently of it that we are not responsible for their existence, though we are for their regulation; while the Moral Affections spring up only after choice, and are so dependent upon it that we are responsible for their existence and character. In a sense they are natural. They are as uniform and necessary after a supreme choice as the natural affections are before that. They become spontaneous, are a part of the character, and, as pertaining to the moral nature, are deeper and more influential than the affections, merely natural. This has not been understood as it should be.

I have just said that the Moral Affections are necessary after choice, and from this we see the central point held by choice in our being. It is the point of Freedom. Everywhere below that, as I showed you, the movement, whatever it may be, is by necessity, and I showed you the harmony there is between freedom and necessity as thus

[1] See Appendix D.

existing, and that necessity must be a condition for the stable, and consistent, and intelligent action of a free being. It must stand below him, and he must rule over it, and by the very means of it. But we now pass over into another region of necessity, and, if you please, into what may be called another region of nature. A man may, or may not, make the love of country supreme. That depends upon choice. But if he does that, he *must* have a complacent love for every man into whose face he looks, and who, he knows, has a similar love. This is by necessity, but it is in consequence of choice. And again, let this same man see a traitor, and he must feel moral indignation. He *must* feel it, and will know that he has a right to feel it, and ought to feel it, though it has often been a puzzle to see how that which is thus necessary and spontaneous could be justly commanded, or could be a part of moral character It is a part of moral character ; nothing more so there is nothing for which we are more fully responsible, and we see how this comes to be.

We may see also that, as the necessity in nature that is before freedom is necessary in order that man may rule over nature; so also is the necessity after freedom of consequences within himself necessary in order that God may rule over him by any system of natural consequences, or indeed by reward and punishment in any form. If the willful lie or fraud did not necessitate a stain ; if the

violation of obligation did not necessitate a sense of guilt; there could be nothing in himself that would lead him to avoid the violation of obligation, or by which he could know the meaning of punishment. The sense of guilt and the remorse are not the punishment, but without them no suffering inflicted for the vindication of authority, or for sustaining the majesty of law, can be known as punishment. So it is that freedom lies between two forms of necessity, the one necessary to the existence of freedom, the other to the moral government of free beings.

We will now consider in their order the necessary results, first of choosing as a supreme end that which is highest, or, which is the same thing, of making supreme the highest principle of action. This is set down in the scheme as Moral Love. We will then consider the results of making Ambition supreme.

Of Moral Love the first necessary result will be the Moral Affections. Complacent Love and Moral Indignation may be said to include all the moral affections, the indignation being evolved from the love when the occasion calls for it, as its opposite pole. In this love it is that we find the proper, and the only enduring basis of friendship as distinguished from mere affinity, and from combinations on the ground of interest. With mutual complacency on the ground of moral character, involving confidence, there is a foundation for

a permanent social state, and for the highest conceivable good from such a state; and there can be no other.

The Moral Emotions, as Hope, Joy, and Peace, presuppose the moral affections as the fragrance presupposes the flower. These, and the religious emotions equally, are the most complex products of the mind, the effluence of all its faculties in their highest activity. Intellect, sensibility, choice, are all involved. Hope implies desire unsatisfied. It is mingled desire and expectation; but joy is fruition itself in the highest form of the Sensibility. It is the rational spirit in the consciousness of its own perfection and of the attainment of its ends. If those ends have been reached through struggle, the moment of victory is preëminently one of joy; but if the struggle is over and all the forces within and without with which the spirit has to deal, move with a balanced activity as the quiet heavens, then the joy settles into Peace.

To the Moral Emotions which must thus enter into and pervade the life of one who chooses the highest supreme end, the Scriptures give the high place which we see they have as I have presented them, and which they must have in any true system of philosophy. Their Hope is a hope that is "an anchor to the soul." Their Joy is an "unspeakable" joy; and any sacrifice needed for its attainment they justify by the example of Him, "who, for the joy that was set before him, en-

dured the cross, despising the shame." Their Peace also is a peace that may "be as a river," and that "passeth all understanding."

The Religious Emotions come next, and are the crowning element in worship. These differ from the moral emotions as called forth in view of God and his attributes; and as generally requiring, in their highest form, volition as well as choice. Hope and joy and peace are from choice without volition, but thanksgiving, and praise, and blessing, and all forms of ascription, in which alone the religious emotions find their culmination, require not only Intellect, and Sensibility, and Choice, but also Volition. It is thus that in worship, the lower animal nature being held in reverent abeyance, everything that is truly man, his whole intellectual and moral and spiritual nature, are brought to their highest activity. The Will, as central, brings the whole being before God and offers it to Him, the emotions going up as incense.

In the moral affections and emotions thus originated, there will be an immediate good consonant with our being, but the action of conscience in connection with them is not to be overlooked. Conscience is not only a witness to record, and a judge to acquit, it also approves and rewards. Connected with it, is its own sensibility having in it monition and prophecy, and an element of peculiar satisfaction that gives the key note to that joy of the spirit that springs from the har-

mony of all its powers. Without this there may be what shall be called joy, but it is of another quality. There may be "the joy of the hypocrite" which "is but for a moment," but there can be no foundation for adequate and permanent joy except as the voice of conscience gives assurance of the harmony of the whole soul with itself and with God. No outward prosperity can avail anything, while this Mordecai sits at the King's gate and refuses to recognize it as legitimate.

So is it that all the powers are harmonized in the choice of the highest supreme end; so is it that wisdom and duty conspire in leading us to that choice.

We next turn to the other column, and to the necessary results of choosing any end lower than the highest.

We will suppose power to be made the supreme end, and so the love of power, or Ambition, to be chosen as the supreme principle of action. Let this be done, and the moral affections placed in the diagram above ambition will spring up of necessity. Let another come into competition with one thus choosing power, and there will be emulation. Let his rival surpass him, and there will be envy; and there is no hatred, or wrath, or revenge that will not stir in a man and become settled passion, issuing in every form of cruelty and crime as the pursuit of power becomes intense, and as others become obstacles in the way. Conscience and humanity and other natural and beau-

tiful principles of action may have wide scope, but if the love of power be really supreme, when the occasion demands it, they will give way, and violence, or treachery, or whatever means may be needed to secure the end will be employed.

Of the Moral Emotions, Hope and Joy will be the same in name as when the right supreme end is chosen. The pursuit of any end implies hope, and the attainment of it joy, or at least some kind of satisfaction; but in quantity, and quality, and permanence, and in their affinities, there may be a difference heaven wide. And such difference there is. Legitimate joy abides, and either becomes the peace of which I have spoken, or alternates with it. What man needs is a joy that may settle into peace, a peace that may at any time rise into joy, as the floods may, now "clap their hands," and now reflect the quiet image of heaven. But the joy of a selfish ambition, excluding, as it must, a sense of dependence on God and the love of others, will connect itself with pride and vanity and self-idolatry, and these are incompatible with peace.

If we pass up to the religious nature, it is clearly impossible that one who makes power his supreme end should have in his worship of God the element that is central to all true worship, that is the submission of the will. There may be for such an one much that is emotive and æsthetic in something that is called religion and worship. In the

absence of the spiritual elements of submission and self-consecration there will be special temptation to appeal to the senses, and to the taste through art; but that a man making power his supreme end should worship God in spirit and in truth would be a contradiction, because, to make anything aside from God supreme either in the affections or the will, is essential idolatry. It is for this reason that idolatry is placed where it is, in the diagram. It must be there if there be religion at all; and history has shown that it is impossible for men to divest themselves wholly of their religious nature.

The direct results just mentioned, of choosing as supreme any object or principle of action below the highest, are as inevitable as those under any law of nature. I call these results direct, because they involve the action of those faculties that look directly at their objects without reference to the action of the Moral Nature that now becomes Conscience, and that acts only with reference to the character of the previous action of the mind itself. It is the peculiarity of the moral nature, as shown by its position in the diagram, that it presupposes direct voluntary action either contemplated or performed in view of objects supposed to have in them a good: the idea of a good and the action of the faculties respecting it being thus the underlying condition of the action of the moral nature. This gives us the position

of the moral nature and the key to the problems respecting it. Its action, sometimes called reflex, and as related to previous action really so, is yet direct upon its own object, which is the character of voluntary action. If the choice be in accordance with the highest good, the conscience will approve; if not, it will condemn; and this action is as necessary after choice as any of the results already mentioned. This it is that makes the position of the wrong-doer so fearful. It is that the moral nature is a *nature*, a part of himself acting by necessity, so that there is no escape. The batteries of conscience, it will be seen, are planted all along the line, and at any point where there is wrong-doing, as there is at every point when a wrong supreme end has been chosen, they are ready to open fire. If these batteries may be silenced for a time, they are yet consciously there; the act of silencing them but charges them more highly, and the only possible ground of a peace that may at any time rise into joy is the perfect accord of the moral nature, acting as Conscience, with the Will. Let the Conscience act so in the light that its decisions shall coincide with the law of God, thus becoming legitimately Law, and let the Will act as Love, and then the Law of Love will reign, and there will be conscious, permanent, and universal peace. But let the Will, on the other hand, fail to need the monitions of Conscience, and no result under any law of nature can be more certain than the disorder and misery that must ensue.

We have now completed our work in its details, and the results have been presented to the eye in parts. In doing this we have needed to know the law of construction for the universe, and the law of conduct for man. The law of construction is the law of the conditioning and the conditioned. This, I have said, implies throughout the relation of lower and higher, and that relation has been indicated by their position on the board. This relation of conditioning is simply that of necessary presupposition without causation; and if any question, as some may, and plausibly too in certain cases, whether that which conditions is always lower, they may express the relation of the two by placing the condition back of the conditioned, as I did in my lectures four years since, and as is done in Appendix A, in "The Law of Love." But in either case it is the law of the conditioning and the conditioned that is the law of construction. So is it with the works of man; so, as far as we can understand them, with the works of God. This law holds throughout, but when it brings us up to the point of choice we need a Law of Conduct. Construction is for the sake of conduct. Conduct is higher, and in order to be philosophical it must not only grow out of the construction by instinct, or impulse, or faith, but must be seen to grow out of it, and be adopted on that ground. As adopted by faith it may be rational, but to be philosophical it must be seen to grow out of the

construction. It is the business of a rational and free being, not to create anything as God did, but to construct a course of conduct. And this he is to do from the same principle, and on the same model as God has constructed the universe. The principle is Love. This we learn from the Word of God. The model is a variety of forces, broader and less broad, which may be represented by a pyramid, the forces being regulated in their relation to each other by the Law of Limitation. This we learn from the works of God. And these two give us the Law of Conduct. Conduct is to spring from Rational Love, the man, meantime, being brought under obligation through the conscience to regulate the various impulsive principles of action according to the Law of Limitation. Combining thus the word and the works of God, we gain a true philosophy both of Nature and of human life.

As has been said, the results of our work have been presented to the eye in parts, let us now look at them as a whole. That we may do this we bring together in one diagram, the several parts already presented.[1] Viewing them thus we have only to begin at gravitation and follow the series up to see how perfectly the laws of construction and of limitation, as they have been explained, apply in every case; and how simple the series is. These laws apply up to the point where the Law

[1] See diagram at the end.

of Conduct is needed. Then the Law of Construction stops, but that of Limitation continues throughout. The Law of Conduct is not less simple in its principle than the others, nor, except from a want of simplicity and thorough honesty in ourselves or others, should we find it difficult of application. God would have men govern their lives on the same principle on which He governs the universe. Let them do that, and their lives will be brought into harmony with Him, into harmony with themselves, and ultimately into harmony with all their surroundings. Thus men will confer upon others whatever of good they are capable of conferring, and will enjoy whatever of good they are capable of enjoying through the susceptibilities and powers of their being, acting according to its law.

Looking at the series as a whole we find a test of the progress of the race. Civilization is not progress. It belongs in the lower part of the diagram, in the region of the appetites and desires and of Beauty. By ministering to luxury and art and to the senses merely, civilization may retard progress. It has often done so. There is no more formidable obstacle to progress than a corrupt and effete civilization. As compared with that a state of barbarism is hopeful. But the things which belong to the Spirit are in another and a higher region, and it is here that we find the test of progress. That test is not in the ex-

tent of knowledge, or in the progress of civilization, but in the extent to which the masses are under the control of that which is highest in the diagram, and the extent to which they adopt a law of conduct in harmony with the conscience. Civilization should, and always will ultimately accompany the paramount activity of the higher powers; but there may be individuals, as the ancient patriarchs, and communities, high in spiritual growth, who are yet but partially civilized, while there may be an advanced, and refined, and contemptuous civilization that is contemptible and well-nigh hopeless. It is Christianity alone, awakening into life and regulating the higher powers, that can furnish the conditions of permanent progress; and nowhere does a spiritual Christianity find an opposition so intrenched and so bitter as in the bosom of such civilizations and from the idolatries consonant with them.

In closing, I ask your attention to the complex nature of that which stands highest on the scheme as worship; and to the position of man as a worshipper.

It will be seen that the affections and acts involved in worship are conditioned on all that is below them. From this it will follow that worship is the highest act which man can perform, and that his nature does not reach its full expression without that. Take, for instance, the intelligent ascription of praise to God, and it will be

found to presuppose and involve the presence and activity of every element of our proper humanity. It presupposes the Intellect, and the recognition by that of the being of God, and of his perfections so manifested as to be worthy of praise. It presupposes the Sensibility, and that it is awake to every manifestation of the divine perfections. The expression of praise is, indeed, a manifestation of the Sensibility itself in an exalted state. It presupposes also the Will, and that too in joyful submission. Without the submission of the Will, there may be external acts of homage through interest or fear, but there can be no true worship. With the Intellect, the Sensibility, and the Will, thus active in view of the highest possible object, there could not fail to be complacent love, and, based on that, in connection with the filial relation, joy, and peace. These being given, the will of a rational being could hardly fail to be put forth in the form of choice to praise God, and in the form of volition to give to that praise its highest outward expression. The ascription of praise would thus go up from the whole of his being as the odor goes up from the plant All that is below in the plant, every leaf and rootlet, contributes to the fragrance of its blossom. And so it is with praise, and with all right forms of worship. They are the complete and full expression of our proper humanity carried up to its highest point. Failing to reach this point, humanity fails of its proper

amplitude and upward growth; there is reaction downward, and the whole being becomes dwarfed and perverted.

But in worshipping God man does not act for himself alone. He is the priest of nature. Standing at its head, and he alone recognizing the Creator, it is only through him that the praise that goes up from all parts of the works of God can find intelligent expression. From the beginning of time those works have been an expression of the perfections of God. As we now look at the march of the creation that expression was relatively feeble at first, but has become more full and pronounced at every new epoch. With the progress in time there has also been progress upward in the manifestation of those forces and products which we have in the series before us, but until man came the expression of praise did not become conscious and articulate. It was for him to gather it up and give it voice, and it is one of his high and peculiar prerogatives to do this. He needs but to have an ear rightly attuned, as was that of him who heard the heavens declaring the glory of God, or that of the Apostle John, in Patmos, and to put it to the universe as God has made it, to hear a low voice coming up from gravitation giving praise to God. And then he would hear that voice rising as he should go up through Cohesion, and Chemical Affinity, and Vegetable Life, and Animal Life, and Rational Life, and the

provision made for every living thing, until he would come into full sympathy with the Apostle, and, with him, be ready to say in regard to the whole universe of God, "And every creature which is in heaven, and on the earth, and under the earth; and such as are in the sea, and all that are in them, heard I saying, blessing, and honor, and glory, and power, be unto Him that sitteth upon the throne, and unto the Lamb, for ever and ever."

APPENDIX.

APPENDIX A.

THE relation of inorganic matter to vegetables, and of vegetables to animals, as indicated in the text, demands attention from its bearing on the doctrine of final causes. Not agreeing with President Porter in his great work, that we have an intuition of final cause, or end, as universal and necessary as that of an efficient cause, I did not place it among the intuitions in the text. Omitting it there, it did not fall in my way to treat of it specifically otherwise. I now call attention to it not only from its importance as an aid to scientific inquiry and from its place as essential to any rational explanation of this universe, but because, since this book was published, a new phase of the denial of that doctrine has become prominent. That phase has come in connection with the doctrine of evolution, and consists in a denial that adaptation within an organism implies design. This denial, covering so wide and prominent a field, is then assumed, directly or impliedly, to extend to a denial of all design in nature.

The ideas of adaptation and of design naturally go together. By some eminent writers they have not been distinguished, but they are so far not the same that in-

stances of adaptation without design are not infrequent. As an instance of this, Paley mentions the skin of the dog-fish used to polish wood. A natural cave is adapted to furnish shelter, but was not designed for that. Such instances are, however, accidental and trivial. The more recent denial is made in connection with the doctrine of evolution, and covers a large part of the adaptations found in organic nature.

Adaptation in organized nature may be divided into three classes. There may be, first, an adaptation of the parts of an organized whole to each other. In this case we may conceive of an adaptive principle or force within an organism that shall strive towards the perfection of the whole, and produce modifications conducive to that. The presence of such a force in the organism itself, which cannot be supposed to be intelligent, would seem to be indicated when the ends of a broken bone are knit together, when a new joint is formed, or when the arteries adjacent to one that is tied are enlarged.

Again, there may be an adaptation of environment to organization, so that the environment shall act upon the organism in the way of causation. It is thus that Professor Tyndall accounts for the eye. He supposes it to have been formed gradually by the action of light upon the more susceptible pigment cells of an organism vaguely sensitive all over. So the horse, with five toes originally, has gradually come, through the action of environment upon organism to have but one. So, too, whales and porpoises, said to have been at one time land animals, are supposed to have had their organism gradually and during long ages so modified that they live in the water.

From these two classes of adaptation we turn to the third. In this we find an adaptation of system to system without causation, but simply as one system avails itself of another as its condition. Aggregated matter in certain combinations is a condition of vegetables, but no one can suppose there is in that anything that produces the adaptations within the vegetables, or that there is in either any causative power to produce that relation by which one avails itself of the other. But as between vegetables and animals the case is still stronger. They mutually modify the atmosphere for the benefit of each other. Only a designing power outside of both could have arranged for this. But more striking still is the fact that animal life is wholly dependent on vegetables for its sustenance. Here we have living organisms not merely ministering to themselves and providing for the continuance of their species, but doing their great work, the only work that really has any value, by ministering to an order of beings wholly above and outside of themselves. By no possibility could such an adaptation have been originated by either the vegetable or the animal, and it is too varied and extended and precise, as well as too important in its results, to have originated from any other than an intelligent and designing cause outside of both.

Cases similar in principle are numerous where there is no organism. What adaptation, for example, can be more perfect than that of the air to evaporate water, and freshen it when salt, and to bear it up in clouds? Here is not only an adaptation that is perfect, but a function that is essential to both vegetable and animal life, and yet any interaction between the air and the

water affecting their inner structure is out of the question.

Can, then, the adaptations of this universe be accounted for without design? That is the whole question. The adaptations themselves no one denies. We say, No. Whatever plausibility there may be in particular cases, we regard as wholly inadequate the attempt, made in connection with evolution, to account without design for adaptation as found in any *whole* department of nature. This we say with no reference to the question whether evolution itself, if it be supposed to include a *system* of favorable interaction between organism and environment, does not necessarily involve design in its widest form. We think it does. But be this as it may, we say that, as within the organism, no such attempt can account for the valves in the veins, or for the second set of teeth, or for the finger nails, or for the contrivance for pulling down the lower jaw. As between organism and environment, we say that no supposition of interaction between them can save from puerility the attempt to account thus for the formation of even one eye, much less of two eyes in the right place, or for the long neck of the giraffe, or the trunk of the elephant. But leaving these departments of nature out of the question, we say that the cases mentioned under the third head are wholly untouched by any form of evolution or transformism. No inner *nisus*, or felt want, or habit of use, or any kind of blind appetency or force can account for that relation by which sensitive and conscious life on this earth, the only life that has in itself any value, is made wholly dependent upon the vegetable kingdom for its existence.

APPENDIX B.

THE idea of Being stands by itself, and, as entering into all thought, requires further elucidation. Mere feeling, or sense impression, or instinctive tendency, is not thought. To think implies a thinker, and a rational thinker, to *be*, must know himself to be. That he should know himself to be enters into our very conception of a rational being, and he cannot affirm this to himself without having the idea of being in general. He who says, I am, says virtually, I am a being. He thus does what is done in all predication. He puts the individual under a class, and so the generic idea is involved. If it be denied that the idea of Being in general is thus involved in the idea which the thinker must have of his own being, it is to be said further that to think is to judge, and that this idea is involved in the use of the verb *to be* as the copula in our judgments. No one can understand the propositions, I am, Gold is ductile, Snow is white, without having the general notion of Being as it is involved in the copula.

But if the general idea of Being is thus implied in thought, is indeed a condition for it, how is it possible it should be given by thought? This question it is difficult to answer without supposing it to be innate, or, as I should prefer to say, connate. It would seem as if it must be elementary in the very first movements of a rational intellect, as instinct is in the first movements of a creature governed by instinct. Accordingly, this is the view of it taken by Rosmini in his work on "The Origin

of Ideas." In the common view, the necessary ideas are grouped together. No one of them is properly innate, but by the constitution of the mind they are immediately and necessarily formed, when the occasion occurs.

But according to Rosmini this one idea of Being, as necessarily involved in thought, is primitive and innate, while the others, though necessarily given, are not necessary to thought, and so are not, in the same sense, innate.

APPENDIX C.



We are now prepared to separate the necessary ideas and beliefs given by the Intellect alone, more clearly than they have been from the other mental furniture. This needs to be done.

The *ideas* are generally called concepts, and are treated as such, but are wholly different from them in their origin and functions. A concept, as its name imports, is a gathering together. It is the result of abstraction and generalization. But these ideas, as those of being, space, time, are simple, and are given at once without abstraction or generalization. These ideas, too, give rise, as concepts do not, to necessary truths and beliefs, as that a body *must* be in space, and an event in time. Of these truths the primitive form is indeed singular; *a* body must be in space, but the passage from this to the universal truth that all bodies must be in

space is by no generalization or induction in any proper sense of those words. It is immediate and necessary, and no experience or repetition of instances is needed to confirm its truth. It is to be said further that, while concepts are the subjects of our reasonings, these ideas and truths enter as elementary into all our reasonings. We conclude, then, that these ideas and truths are wholly apart from the processes of generalization and induction in any use of those terms that is not unusual and misleading.

Again, if, as we may, we term the truths connected with these ideas *intuitions*, we need to put them in a separate class. As originating from the mind itself, they are wholly different from the intuitions of sense. They differ also from mathematical intuitions, as common and necessary to all men. One may live his lifetime without having it occur to him that two straight lines cannot enclose a space, but he *must* know that he exists, and continues to be the same person.

Again, these ideas and beliefs must be distinguished from those necessary products of the mind when the Intellect is combined with the Sensibility, or with the Sensibility and the Will. In the text the necessary products of the mind are divided into three classes. Of these the first differ from the others in that they are simple, and do not, like beauty and obligation, admit of modification by education or culture. The idea of cause, for example, which is placed in the third class, not because it is not given by the pure Intellect, but because it could be known as cause only through the will, is the same at one time as another. So of being, and personal identity, and of resemblance.

Still further are these ideas removed from those high abstractions, the True, the Beautiful, and the Good, supposed by some, since the time of Plato, to be, in common with them, ideas of the Reason. The True, the Beautiful, and the Good are not general ideas, since no individual can be brought under them. They are not given at once, or necessary to thought. They seem rather to be abstractions expressive of qualities or attributes in their most general application and highest degree. How they differ in kind from their opposites, the False, the Absurd, the Deformed, the Evil, or from others less high, as the Ridiculous, the Desirable, the Poetic, the Imaginative, or even from *the white*, used to express whiteness in its highest degree, it may be difficult to say. But whatever they may be, they clearly imply long previous processes, and have little affinity with those simple and primitive ideas that enter into all our thinking.

APPENDIX D.

When the Lectures were delivered reference was made to Mr. Martineau at this point, and, according to the stenographic report, substantially as follows: —

In speaking of obligation and of right, it is due to Mr. Martineau, and to myself as having come independently to the same view with him, though I did not state it as well, that I should say a word respecting the position taken by him as related to my own. It was

said by me here in 1860, long before I had heard of Mr. Martineau, that "we shall readily see what that form of activity is to which responsibility ultimately attaches. It is not volition regarded simply as an executive act; it is *preference*. It is that immanent act of preference in which we dispose of ourselves and on which character depends."[1] I said again, "We are not to eat from conscience, else why the appetite? The affections are not from conscience, else they would not be original parts of our nature. It is not the office of conscience to supersede any of the natural principles of action, nor can it ever lead to action except as there are grounds for that action furnished by principles other than itself."[2] As I understand it, these two extracts — and many others might be given — involve the whole doctrine of Mr. Martineau, except the doctrine of motives as higher and lower, and that is fully treated of in the "Lectures on Moral Science." The last extract makes Conscience a *knowing with*, in everything pertaining to Morals, as Consciousness is in everything pertaining to the whole mind. The same view I stated explicitly four years since, when I had not seen Mr. Martineau's review of Whewell. It is, indeed, fully implied in the passage quoted from "The Law of Love," in the eleventh lecture to which Dr. McCosh and others have objected.

The view of Mr. Martineau is as follows. He says, "Every moral judgment is relative and involves a comparison of two terms." "This fact, that every ethical decision is, in truth, a *preference*, an election of one act as higher than another, appears to us of funda-

[1] *Lectures on Moral Science*, page 168.
[2] *Id.* page 221

mental importance in the analysis of our moral sentiments." "Every action is *right*, which, in the presence of a lower principle, follows a higher; every action is wrong, which, in the presence of a higher principle, follows a lower." Further on he says, "The preferential character attaching to all moral judgments is implied, and yet as it seems to us very inaccurately represented by Butler. In describing the constitution of our nature he presents to us, first of all, as springs of action, a system of 'particular passions' and desires, such as the bodily appetencies, pity, anger, social affection, each pursuing an end appropriate to itself; and then, as a supplementary and crowning spring of action, conscience, having also its own separate end, namely, right voluntary dispositions and actions. The collection of ends embraced by the former constitutes *natural good*, of which each ingredient in its turn is equally eligible: so that thus far our nature is a republic of equal principles. The single additional end of conscience constitutes *moral good*, which has a natural right of supremacy over the other. Now, for our own part, after the most diligent search, we cannot find within us this autocratic faculty, having its own private and paramount end."[1]

Conscience, then, according to Mr. Martineau, never acts with reference to a single end, but always to decide the choice between two, each of which furnishes in itself a reason for action, and the higher of which, in virtue of its being higher, furnishes the ground of approval and of impulse. This is precisely what I said in the passage already quoted. "No man can be under obligation to do an act morally right, for which there is not a reason

[1] *Review of Whewell.*

besides its being right, and on the ground of which it is right." Conscience has no separate object, as *the right*, with reference to which it acts. Its office is to affirm obligation to choose a higher end when it comes into competition with a lower one, which higher end is not presented by the Conscience, but by some form of the Sensibility. It must be found in some form of the good of beings capable of good; and if there were no beings capable of *good* through a Sensibility, there could be none capable of *goodness* through the Will. What I say, therefore, is not merely that the Will is dependent on the Sensibility for its *motives* in moral action, but that the Moral Nature itself is conditioned upon it, and inconceivable without it.

With a high admiration for Mr. Martineau, I do not agree with him on some points. I do not believe, as he seems to, that wisdom and holiness are attributes of the Divine Being as hardness is the attribute of a stone. As will be seen further on, I do not agree with him in relation to the precise office of conscience, and I believe, and shall endeavor to show, that we are not left to the guidance of instinct alone in deciding which of our principles of action are higher and which are lower.

EXPLANATION OF THE DIAGRAM.

THE whole system and process of the lectures is given in the Diagram. The process begins with Analysis, or Separation. Man is first separated from all other objects and beings; and, by a law which is found to make the structure of the universe below him pyramidal, he is placed at their head. He is so as gathering into himself everything which they possess, with something added.

The place of man being thus found, we separate the body from the mind. As a condition for the mind we examine the body first, separating it into its different parts by Anatomy; and into its different systems as functional, by Physiology; the order of the systems being determined by the same law that determines the order of the forces of nature. Of these forces we find the products when they act according to their law.

Having examined the parts and functions of the body, we pass to the Mind. That we divide into the Intellect, the Sensibility, and the Will, and proceed to examine them in their order.

We first take the Intellect as conditional for the

others, and represent that as acting alone, by a single vertical line. Before this we suppose objects to be presented in front, and necessary ideas to be originated within it, which are represented as thrown back of the line. We thus furnish the Intellect, so far as that can be done acting by itself, through the Presentative and the Intuitive Powers. We then consider the Representative Powers, and then the Elaborative, dividing them into their parts and finding their legitimate products.

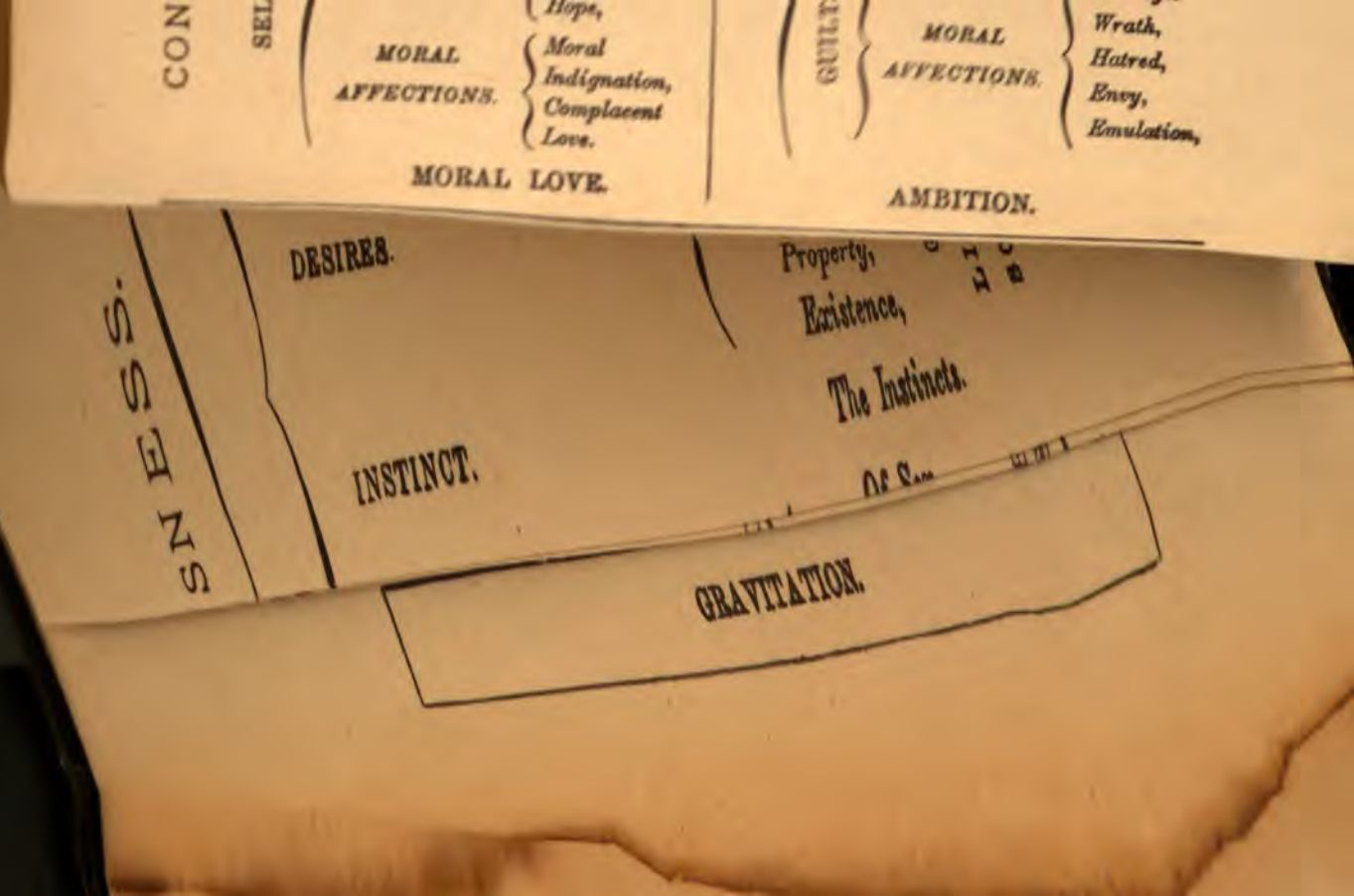
From the Intellect we pass to the Sensibility as conditioned upon it. As thus conditioned the two must act together, and we therefore represent them by two lines united. We then examine the forms, the processes, and the products of the two united, as we had before those of the Intellect singly.

We next take the Will. And because the Will is conditioned upon the other two, we represent them by three lines united, and inquire as before for the contingent and the necessary processes and products from their combination. This brings us up to the region of Personality. It constitutes the man.

The man being constituted, we pass to an entirely different region. The tree is grown; it is now to bear fruit. The end of the man is free rational choice and action under the government of God, with the results of such choice and action.

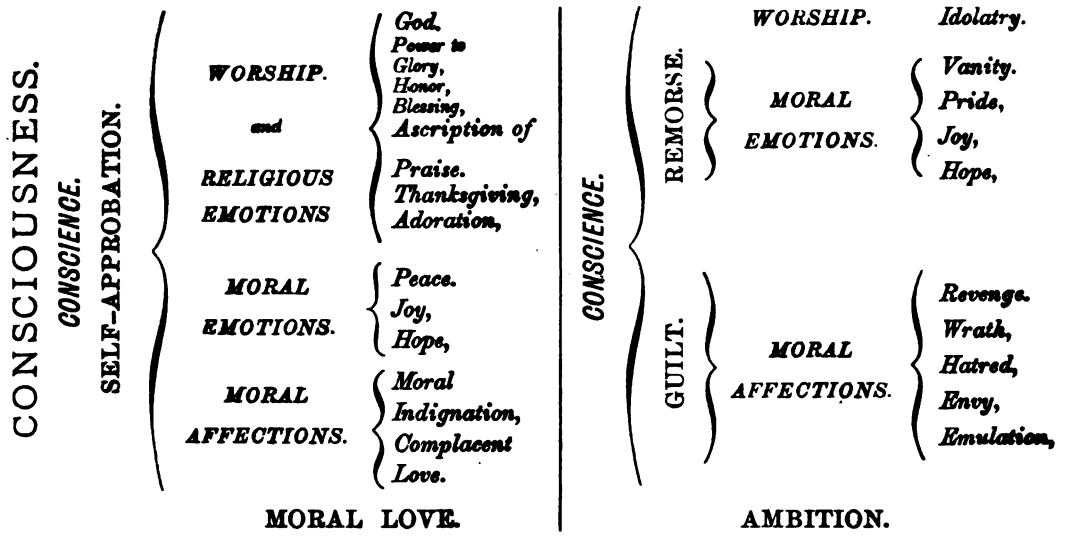
But as Choice must involve an alternative, the column will now divide itself into two branches; and, as we had, up to the point of choice, nature and necessity, and so science, so now we have these after Choice, with results differing according to that.

In connection with these operations we have Consciousness; and this is so written as to indicate its connection with them all. In connection with moral operations we have also Conscience, and this is written in the same way.


CONSCIOUSNESS.
SELF-CONSCIOUSNESS.
Hope,
MORAL AFFECTIONS.
Moral Indignation,
Complacent Love.
MORAL LOVE.
GUILTY
MORAL AFFECTIONS.
Wrath,
Hatred,
Envy,
Emulation,
AMBITION.
DESIRES.
Property,
Existence,
The Instincts.
INSTINCT.
GRAVITATION.

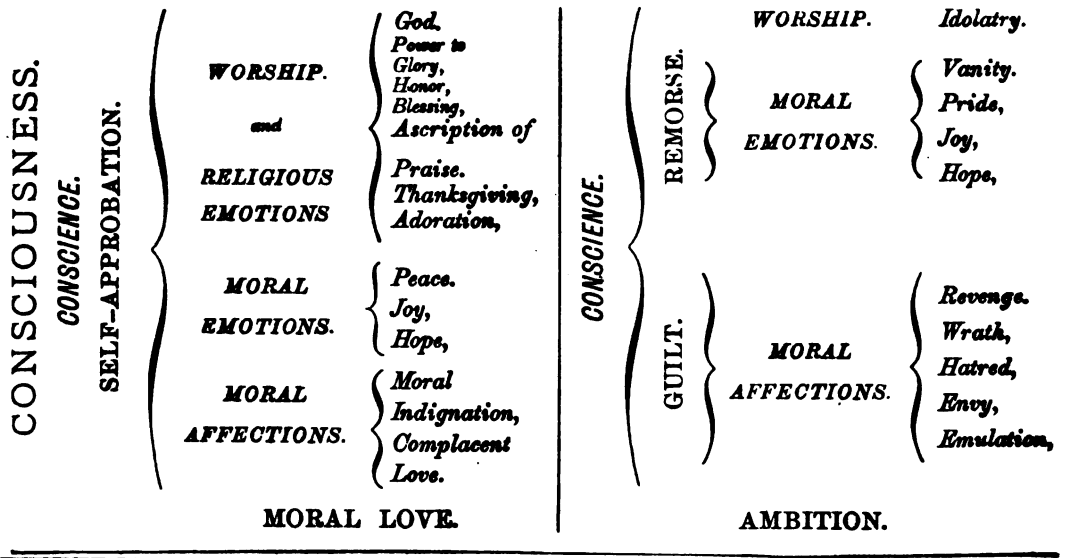
ANALYTICAL CHART.

This and all the constructive diagrams are to be read from below upward.



ANALYTICAL CHART.

This and all the constructive diagrams are to be read from below upward.



[redacted]

[redacted]